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ABSTRACT

This booklet describes two educational projects financed by the World Bank in cooperation with UNESCO. Tanzania was the site of one project, where agricultural training at the intermediate and farmer levels was the focus. The second project was in the Ivory Coast and involved construction of technical, vocational, agricultural, teacher training and general secondary schools, and an instructional television production center. The parts of the projects treated here are those which have added to the World Bank's experience in educational development: farmer education in Tanzania and instructional television in the Ivory Coast. Each of these programs is described in detail, covering aspects of development, program organization, structure and content, participant reaction, and informal evaluation. The interaction of the programs with each country's cultural background and development process is emphasized. (KSM)

Educational Experiences in Tanzania and the Ivory Coast

TORCHES in the NIGHT

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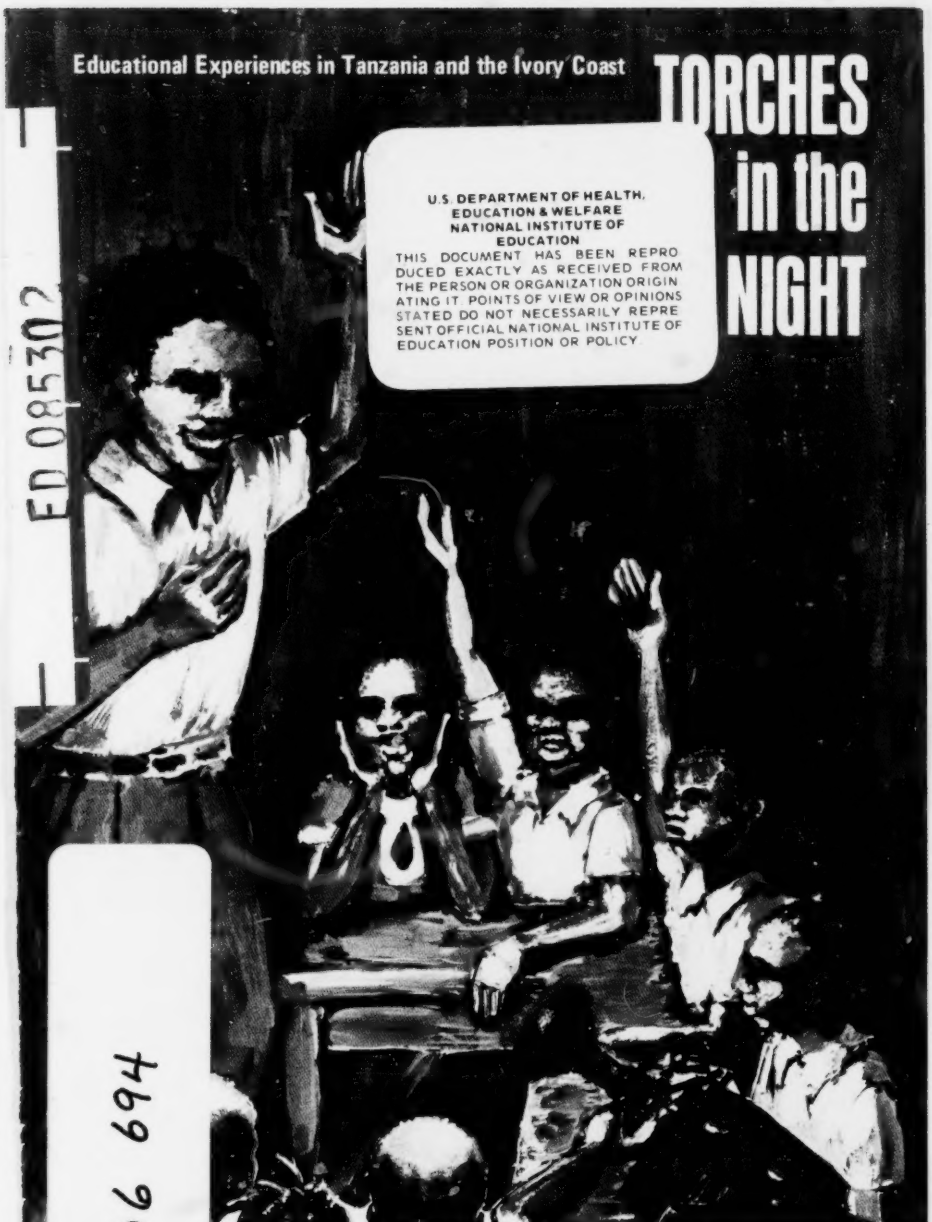

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TORCHES in the NIGHT

Educational experiences in Tanzania and the Ivory Coast

Peter C. Muncie, author of Torches in the Night, is a staff member of the World Bank. The views expressed in Mr. Muncie's paper are his own and do not necessarily reflect those of the World Bank.

Introduction

"The State Parties to the present Covenant recognize the right of everyone to education. They agree that education shall be directed to the full development of the human personality and the sense of its dignity, and shall strengthen the respect for human rights and fundamental freedoms."

From Article 13, of the United Nations International Covenants on Human Rights.

A worldwide crisis exists today in education.[1] "Large-scale efforts, financial sacrifices and considerable results – in the education race as in the march to economic progress – have all failed to prevent the continued widening of the gap between industrialized and developing countries,"[2] a recent Unesco study reports.

The statistics used to back up this assertion are sobering indeed. Despite the fact that in 1968, world public spending for education rose to about $132 billion as compared with $54.4 billion in 1961, consider the following:

– Of the $132 billion figure, $120 billion was spent in Europe, the Soviet Union and North America, though these areas combined contain only one-third of the world's population and one-quarter the world's number of school-age children.

– In the poorer countries, as much as 40 per cent of the budgets for education are spent on children who leave school after three years or less of instruction.

– In Europe, the Soviet Union and North America, school attendance between 1960 and 1968 increased at the same rate as the population. In the developing countries, the population of school-age children (5 to 19 years old) increased by 36 million more than enrollment.

– The number of school children in the developing world is greater by 65 million than in the developed world, but the number of school teachers in each is the same.

– Between 1960 and 1970, the number of illiterates over 15 years of age in the world increased by 50 million.

This crisis has not happened because no one cares, because few are interested either in giving or receiving an education. In fact, the Faure Commission reports, demand for education is "incontestably a universal historical phenomenon. All indications are that this trend will gather momentum. It seems to be irreversible."[3]

Indeed, there are few in the world who object to the idea of education in the abstract. This is perhaps as it should be, for education in the abstract is worth defending. Governments spend money for education even when they cannot afford to do so. Parents demand that their sons and daughters grab, as one West African newspaper puts it, the *"torche dans la nuit"* – even in the absence of proof that education will be of any material value to them.

Few object to education because, for one reason, there is little agreement as to what the goals of education are. A government, for instance, may invest heavily in education in order to stem the migration of its rural citizenry to urban areas, while the rural folk may, at the same time, clamor for education so that they may be freed from the tyranny of the soil.

In the rich countries of the world, in nations already highly literate, questions about education tend to focus on ways to improve that which already is. In the poor countries, on the other hand, questions are altogether more fundamental: should money be spent on secondary or primary education? Should education be of a general or vocational nature? Should money be spent on the education of adult illiterates? Should instruction be carried out in a non-native language? If so, at what level?

There are no internationally-applicable answers to these questions. Virtually each country in the developing world faces problems unique to its own situation. Nonetheless, in spite of the diversity of the problems, unanimity of belief exists that educational neglect would be morally, socially, and politically disastrous.

One social scientist has written that "the progress of a nation depends first and foremost on the progress of its people. Unless it develops their spirit and human potentialities, it cannot develop much else – materially, economically, politically, or culturally. The basic problem of most of the underdeveloped countries is not a poverty of natural resources, but the underdevelopment of their human resources."[4]

Most agree, though there is no great mass of empirical evidence to support this view. The belief that economic development is inexorably tied to human development is often taken on faith alone. Cost/benefit and capital/output ratios, which trip from the hand of the economist evaluating the wisdom of building a power plant, do not so easily come from an assessment of an investment in education.

There does seem to be, however, a strong correlation between a nation's educational and economic development. Gunnar Myrdal goes so far as to write that "with the major exception of the post-war economic theorizing and planning for development in underdeveloped countries, nowhere in the world in modern history has there been any discussion of economic development that did not give educational improvement a predominant role."[5]

But even the most enthusiastic among educational planners would not deny that education is but one key to economic development. Obviously other factors play a great role – from political leadership to climate, from the wealth of natural resources to the access to foreign markets. How large a role educational development plays in a nation's progress is still, today, in dispute, and it is doubtful whether any definitive answers will be found in the near future. "If the analogy of education with other production investment be admitted, it follows that there must be a return," writes John Vaizey. He adds, "I shall examine

a number of contributions to show the sort of approaches that can be made to solve the problem (of how the return can be measured.) It will be seen that none of them are satisfactory."[6]

George Tobias, a former staff member of the World Bank, wrote in 1964 that the Bank's decision to consider the financing of certain education projects "represent(ed) trail-blazing ventures into international educational financing."[7] It was so, he added, "because the Bank's reputation assure(d) it of an attentive audience in the financial community. Its announcement established the priority of long-term capitalization of the costs of education."[8]

The Bank's decision, seen from the perspective of today, hardly seems revolutionary. The times were different in 1963, however. If economic rates of return for education projects could not be calculated, the conventional wisdom of the day went, how could the Bank be sure that its loans could ever be repaid? And how could the Bank attempt to raise money in major world capital markets if bankers could not be convinced that loans for education were prudent investments?

As so often happens, decisions often force themselves upon large institutions. The Bank would have – eventually – entered the field of educational development, but its plunge would probably have come later had it not been for the fact that "the Bank's own lending experience had demonstrated that economic development projects often cannot be devised, or if devised, cannot be efficiently operated without the trained executives, engineers, technicians, and administrators so sadly lacking in the underdeveloped countries, and indeed, not abundant everywhere."[9] In the developing world of 1963, executives, engineers and other skilled workers *were* lacking, and lacking in increasing numbers, as new nations emerged from their colonial cocoons.

A skilled and educated labor force has not always been a necessary ingredient to economic progress. Though only one out of every twenty Americans had a secondary education in the late 1800's, the United States was nevertheless a country with considerable economic power. Until the Nineteenth Century, technology was an undemanding master, for technological progress was characterized by changes based either on improvements to the old ways of doing things or on the fruits of individual invention. Change was slow and assimilation of change was relatively easy. Technological gaps, when they existed, were never wide, and were easily bridged.

Today, however, technological change is propelled exponentially by scientific research. Gunnar Myrdal concludes that "it is reasonable to assume that the growth in scientific knowledge is proportional to the sum of knowledge previously acquired. Knowledge should thus grow at a compound rate of interest, and technology should advance along a parallel, or more steeply rising line."[10]

Though technology is often held up to the poor countries as a shortcut to development, it can rarely be adapted to fit their needs and capa-

bilities. Thus technology, though it provides a means by which development can occur, can impose constraints upon development as well.

When the Bank first began lending money for educational development, guidelines were set limiting its efforts, save for "exceptional cases," to financing vocational and technical education and training, and general secondary education. Further, lending to those two categories was to consist "mainly of construction and equipment of school buildings" – activities which lent themselves to the bank-like image of the Bank.

The Bank soon learned, however, that "hardware" financing could never hope to solve many of the problems in the education sector. And the need of many developing countries for what had, in the past, been considered minor components of Bank activities in education – technical assistance, the financing of software-curriculum reforms, education planning, production of teaching materials – soon became as great as was the need for "hardware."

By 1970, Robert S. McNamara, the Bank's fifth president, in reaffirming the old 1963 guidelines, could add that "we should broaden the scope of projects considered . . . We should also consider for financing other types of projects . . . which should have important long-term significance for economic development," projects "designed to encourage changes which involve the relevance, efficiency or economy of education systems."

Though the Bank has concentrated on capital financing in the education projects it has financed (leaving it to others – mainly Unesco – to provide the technical assistance related to the projects' educational and institution-building objectives), it has, in recent years, increasingly gone beyond the "bricks and mortar" approach in its support of educational development. And it is in Africa that the Bank has most often expanded its horizons in project lending for education.

This booklet describes aspects of two of those projects – one in Tanzania involving agricultural training at intermediate and farmer levels, and one in the Ivory Coast involving the construction of technical, vocational, agricultural, teacher training and general secondary schools and an instructional television production center.

The key word here is "aspects" because this report does not begin – nor is it intended – to go into detail about each component of the two projects. It treats, rather, only those parts of the two which add to the Bank's experience in the field of educational development: farmer education in Tanzania and instructional television in the Ivory Coast.

Another reason for saying "aspects": the Governments of Tanzania and the Ivory Coast are much more than mere onlookers in the development of their educational systems. Both make substantial contributions from their own treasuries to speed the success of their educational efforts. So, what follows is a report on Tanzania and the Ivory Coast – and on a member of the supporting cast, the World Bank.

TANZANIA

FOR IMMEDIATE RELEASE

INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H STREET N.W. WASHINGTON D.C. 20433 TELEPHONE: EXECUTIVE 3-6360

IDA Press Release No. 71/5
February 4, 1971

Subject: $3.3 million credit for education in Tanzania

The International Development Association (IDA) today announced a $3.3 million credit to Tanzania to finance the expansion of facilities for agricultural training.

The credit will help finance the construction or expansion of nine Rural Training Centers for farmer training and four agricultural institutes to train personnel for employment as field officers in the agricultural extension and other services. It will also help finance related technical assistance.

This is the third IDA credit for education in Tanzania. The two previous credits totaling $9.6 million were extended to assist the expansion of the secondary school system, teacher training facilities and expansion of the Dar es Salaam Technical College.

The agricultural institutes will make possible an increase of about 250 in the yearly output of trained field officers for extension services. The new Rural Training Centers will supplement the work of the agricultural extension services by providing short courses of training for about 25,000 farmers a year.

The IDA credit represents 70% of the total cost of the project, estimated at $4.7 million, and covers all of the foreign exchange component and part of the local currency expenditure. It is IDA's ninth to the United Republic of Tanzania and, together with three previous World Bank loans, brings World Bank Group lending commitments to Tanzania to $102.9 million.

The credit is for a term of 50 years, including a 10-year grace period. It will be interest free but carries a 3/4 of 1% service charge to meet IDA's administrative costs.

Tanzania's development strategy is focused upon the agricultural sector, which accounts for about 40% of gross domestic product, some 75% of exports and over 90% of total employment.

Tanzania's agricultural education plan, including the present project, is partly based on preparatory studies made in 1969 by a joint IDA/FAO Cooperative Program mission.

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"One boy asked, 'What happens to us, with our education, when we go back to our home areas?' Nyerere replied sharply, 'What do you expect is going to happen to you? In Tanzania, ninety-six per cent of the people live on the land and farm it. Therefore, ninety-six per cent must go to the land where the people are, and four per cent can go to the cities.' " . . . *We Must Run while They Walk*, by William Edgett Smith

Julius Nyerere, Tanzania's first and only president, *does* have a way of replying sharply to his countrymen. In this politician's hortatory arsenal, rhetorical flourishes form no indispensable weapons system. Nor is Nyerere one who chooses to perpetuate the more romantic myths of Africa, both past and present:

. . . "The truth is that our United Republic has at present a poor, underdeveloped, and agricultural economy."

. . . "The land is the only basis for Tanzania's development; we have no other."

. . . "The education now provided is designed for the few who are intellectually stronger than their fellows; it induces among those who succeed a feeling of superiority, and leaves the majority of the others hankering after something they will never obtain."

In such language, unafflicted by cant, has Tanzania's future political, economic and social course been charted, through a series of documents widely distributed and sold throughout the country: *Ujamaa – The Basis of African Socialism,* (1962), and others of more recent vintage: *Freedom and Unity, Freedom and Socialism, Freedom and Development, Principles and Development, Education for Self-Reliance,* and *Socialism and Rural Development.* All are written by Tanzania's 50-year-old President. The one major document under different authorship, *The Arusha Declaration and TANU's Policy on Socialism and Self-Reliance* is, however, pure Nyerere in its ideology.

So that the rare, unaware Tanzanian reader may more readily grasp the point, those words deemed particularly essential in texts containing official government policy are often emblazoned in capital letters. This practice often lends the documents an air of patent medicine advertisements of an earlier age: "Between MONEY and PEOPLE, it is obvious that the people and their HARD WORK are the foundations of development," the TANU (the country's only political party) essay exclaims. Again, somewhat later in the pamphlet, the reader is told that "industries will come and money will come but their foundation is THE PEOPLE and their HARD WORK, especially in AGRICULTURE."

These documents are not written to be cast aside and forgotten like so many campaign promises in other lands. Practically everything that goes on today in Tanzania seems to result from – or at least reflect – some speech or article written earlier by the Mwalimu, or Teacher, as Nyerere is affectionately known.

Recently a visitor to the country inquired of a middle-level government official about the philosophical underpinnings of his country's educational policies. "Well," the official began, *"of course* you have read *Education for Self-Reliance."* Thorough knowledge of Nyerere's essays makes for neat verbal shorthand in Tanzanian communications.

And, in fact, a reading of *Education for Self-Reliance is* essential to an understanding of the country's educational system, just as the pamphlet *Socialism and Rural Development* is required reading for an understanding of Tanzania's political and economic development policies. The Mwalimu may have exaggerated somewhat (but not by much) when he told the student that 96 per cent of all Tanzanians live on the land, but he did not exaggerate when he wrote that "the land is the only basis for Tanzania's development."

The Tanzanian Government also believes that since the basis for the development of the country must rest with the land, then the basis for the development of the land must rest with the ujamaa village.

Ujamaa is the Swahili word for "familyhood." Its meaning has been expanded to embrace the tenets of egalitarian socialism as well. In *"Ujamaa — The Basis of African Socialism,"* Nyerere argued that exploitation of man by others was incompatible with the beliefs of his socialist nation. Even in a poor country like Tanzania, he wrote, a man might become a millionaire. But, added Nyerere, the accumulation of wealth was an "anti-social" act, amounting to a "vote of 'no-confidence' " in the nation's social system.

The deeply religious (he was baptized a Catholic when he was 20) Nyerere went on to write that the land, the basis of wealth in the country, was "one of God's gifts to man."

"I cannot believe that God is so careless as to have made the use of one of His gifts depend on the misuse of another!" he exclaimed.

Capitalist exploitation was introduced into the country by its colonial masters; what was needed to produce a just society, Nyerere argued, was to harken back to African traditions, where "everybody was a worker," where all had a "sense of security" in society, where "it was taken for granted that every member of society — barring only the children and the infirm — contributed his fair share of effort towards the production of its wealth.

"The TANU Government," he concluded, "must go back to the traditional African custom of land holding, that is to say, a member of society will be entitled to a piece of land on condition that he uses it. . . . Freehold ownership of land . . . (therefore) must be abolished. Ujamaa, then, or 'familyhood' describes our socialism."

And finally, with the missionary in him overcoming the politician, Nyerere concluded by saying that "our recognition of the family to which we all belong must be extended yet further — beyond the tribe, the community, the nation, or even the continent — to embrace the whole society of mankind."

No such extension has yet occurred. No grid for a national network of ujamaa villages has yet been drawn,[11] and even in those areas in which people have gathered together in "familyhood," no conclusions about the economic effectiveness of the ujamaa experiment can yet be essayed.

Tanzania's ujamaa experiment aims at nothing less than a transformation of life in the nation. No one expects miracles to occur overnight. By living and working in communities, Nyerere wrote, "we would not automatically become wealthy, although we could all become a little richer than we are."

People who, for centuries, lived in comparative isolation from each other, are being asked to leave their gardens, pasture lands, and houses, and to move into communities where the land is called "our land," where the crops are called "our crops," and where "our shop" provides the day-to-day necessities from outside.

Three major elements go into the making of a ujamaa village. The first, chronologically, is persuasion. The Government has to date, with few exceptions, limited itself to persuading the people to give up their traditional ways and to form co-operative societies. Second, most of the work of creating the new society is done by the villagers themselves; the Tanzanian Government is too poor to provide more than a minimum of services – transportation to the village site, the digging of the village well, for instance. And finally, the villagers themselves must decide what enterprises are to be undertaken in the new village, and how their money, earned chiefly through the cultivation of cash crops, is to be spent.

This is the ideal. And the ideal is no less hard to achieve in Tanzania than it is elsewhere in the world. ("Traditional Africa was no more composed of unselfish and hardworking angels than any other part of the world," Nyerere once wrote.)

It disturbs Tanzanians to be regarded by well-meaning Westerners as a new race of saintly socialists. One man, a long-time friend of the President, once told a visitor, "In the West, oftentimes people look at the African as the lowest of the low, or they put him high above the clouds. Both attitudes are wrong. Both attitudes reflect the thinking of Africans as *types*. We are human here, and we make mistakes like all other humans."

Tanzania obviously cannot be transformed simply by moving people from location A to location B; the country cannot be transformed by a change from "my land" and "that shop" to "our land" and "our shop." Much more is needed.

One vital catalyst in transforming the very essence of the nation involves the reformation of Tanzania's educational system.

With some modifications, Tanzania's system of education basically conforms to old British patterns. Primary education – for the minority who get it – lasts seven years. After the seventh year, pupils take the

General Entrance Examination; those who score well are admitted to the limited number of places open in secondary schools. For those who do not pass, schooling is ended. Secondary education lasts either four or six years. After the fourth year, students sit for the School Certificate Examination. Those who excel remain in secondary school. Those who do not can continue their education at agricultural, technical or normal schools. After the sixth and last year of secondary education, students take yet another test, the Higher School Certificate Examination. Superior scores qualify the brightest to enter the University.

Quotas for secondary school students and university students are strictly controlled by a national manpower commission which calculates how many government positions in every conceivable category of employment will be needed in the future. Thus, though successful secondary school and university-level graduates are assured of a job upon graduation, they form but a fraction of those who begin their education at the Primary 1 level. Perhaps only as many as 45 per cent (and that's a high estimate) of school-age children in Tanzania today get any education at all. Secondary school students number only about 2.5 per cent of the total in their age group. Students at the University of Dar es Salaam number less than 2,000.

In 1967, Nyerere felt compelled to speak out against what he felt to be both anachronistic and anti-social tendencies in Tanzania's system of education.

"There are four basic elements," he said, "in the present system which prevent, or at least discourage, the integration of the pupils into the society they will enter, and which . . . encourage attitudes of inequality, intellectual arrogance and intense individualism among the young people who go through our schools."

First, he said, was the undeniable fact that Tanzanian education was "elitist," designed exclusively for the gratification of those students who were able to climb successfully the educational ladder.

Second, the country's educational system was "such as to divorce its participants from the society it is supposed to be preparing them for."

Third, the system "encourages . . . the idea that all knowledge which is worthwhile is acquired from books or from 'educated people' — meaning those who have been through a formal education."

And finally, he castigated the schooled elite for its failure "to contribute to that increase in output . . . so urgent for our nation," and added that "they themselves consume the output of the older and often weaker people."

Such a system must cease, Nyerere decreed. But, he warned, the necessary changes would have to be made at no additional cost to the national budget: "The truth is that there is no possibility of Tanzania being able to increase the proportion of the national income which is spent on education; it ought to be decreased." And though deploring the fact that less than a third of all primary school children went on to

secondary schools, the President warned that "in particular we cannot solve the 'problem of primary school leavers' by increasing the number of secondary school places." Nor did he hold out the promise in the immediate future of universal primary education for Tanzania's children. We can't afford it, he declared. "These are the economic facts of life for our country. They are the practical meaning of our poverty."

Educational reform would be served, the Mwalimu ordered, through curriculum reform, the re-organization of schools, and by increasing the age of those entering primary schools.

Education must no longer be looked upon as a preparation for more education, Nyerere said. Because most students must be content with only a primary education, it was essential that those seven years prepare them for their life on the land. For those fortunate enough to go further, education "must prepare people for life and service in the villages and rural areas of this country."

At another point in his essay, *Education for Self-Reliance,* Nyerere said flatly, "Our sights must be on the majority" – those 96 per cent in the villages, those who increasingly were gathering into ujamaa villages.

Schools – especially secondary schools – had to strive for self-reliance, not so much for the savings involved, but as "a recognition that we in Tanzania have to work our way out of poverty and that we are all members of the one society, depending upon each other," and as a means of demonstrating that "children must learn from the beginning to the end of their school life that education does not set them apart but is designed to help them be effective members of the community – for their own benefit as well as that of their country and their neighbors."

* * * *

In October, most of Tanzania is very dry, for the rains, which quickly turn the brown countryside to green, do not begin for another month. Along the country's coast fronting the Indian Ocean, however, rainfall is sufficient all year long for a strip of land perhaps a hundred miles wide to remain green, to permit the cashew crop to be predictable, to allow the sisal estates to thrive.

The town of Morogoro lies 100 miles west of Dar es Salaam. The trip from the capital to Morogoro takes about two and a half hours by car – if one is in a hurry. Traffic on the narrow, crumbling road is heavy; buses filled with Chinese laborers building a new railroad that roughly parallels the road shuttle back and forth throughout the day.

For most of the way from Dar es Salaam, the land is flat and monotonous, but just as the traveller wearies of the sameness of the landscape, mountains begin to break up the emptiness to the west. Here, for much of the day, a thick fog cover clings to the sides of the mountains; in the valleys, orange and lemon trees grow in profusion.

Halfway up the side of the most rugged of the mountains that ring the small town of Morogoro stands a complex of 85 buildings which

forms the campus of Morogoro Teachers' College. The most impressive of the buildings, and the oldest, has nothing to do with the training of teachers: it is the Holy Ghost Fathers' Seminary.

Father John Franken, principal of the College since 1956, is a Holy Ghost Father, and like the rest of the Fathers, was born in Holland. In Father John's case, that was many years ago; how many he does not say, but he will admit that he has been educating future Tanzanian teachers for 24 years.

Most of the college buildings are monuments to John Franken's tenacity – and salesmanship, for they have been built with money he has raised during home leaves spent in Europe. Now, however, for John Franken, home is in Tanzania; he is a citizen of the country. For many years, he has been a close personal friend of Julius Nyerere, and more than any Westerner in the country, he is thought to understand that which Tanzania has attempted to achieve through its educational reforms.

On a cool, cloudy October afternoon, Father John takes leave of one of his classes (with less than three dozen teachers at the school, he must teach regularly) to talk about the "new Tanzania." John Franken is a man of enormous energy – he cannot sit still when talking – and, rare in a country that is too busy getting on with the task of development to find time, during working hours, to pause for laughter, he permits himself to find amusement in subjects as serious as educational change and development.

"Universities and colleges are always the worst places to go to in a developing country," he begins. "They are usually bad for the teachers and for the students. The students, of course, because they are so few in number and so privileged because they are so few; that hardly breeds the kind of situation one would desire in a poor country. And the teachers, the expatriate foreign teachers at any rate – they are usually either disappointed capitalists who think the country is going to ruin or else they are disappointed communists, who, in the case of Tanzania, come here to find a heaven in ujamaa – a heaven they never find, of course.

"But there *has* been a change here, a real change and it dates from 1967, from *Education for Self-Reliance.* The students now have respect for work. Before, the educated classes, when they came to school, would expect servants to do everything for them; they felt that all manual work was beneath them. Now, if a student couldn't find manual work to do, or if there were servants to make his bed, he wouldn't like it. He now *wants* to do something for himself.

" 'Learn through living' – that was the ideal of *Education for Self-Reliance.* It hasn't been achieved yet. We aren't self-reliant and the schools can't live by themselves. Schools are different than other institutions. There's a prison near here which is self-supporting. We can't be. How could we teach here, if, for instance, the students had to go milk

the cows every day? But if we are not completely self-reliant now, we can at least say that attitudes and traditions have been re-ordered.

"We *can't* originate a real revolution in Tanzania. True, a revolution *would* be accepted by the masses, but it wouldn't be accepted by those who breed children to grow up to get white-collar government jobs.

"The ujamaa idea in Tanzania – we hope it will be beneficial to 95 per cent of the people and extremely harmful to the other 5 per cent. But we have accepted the fact that we will not use force to break the grip of that 5 per cent. So how can we change them? Only when they are scared stiff, but we will not scare them stiff.

"A few years ago, I went to North Korea for a visit. There, the primary schools were all productive units and that's the only place I've ever seen schools like that. The kids would bring their parents' clothes to school with them; they would mend the clothes and wash them as part of their school work and *that* would be the domestic science lesson for the day. The tractor repair shop for the commune was located at the school and the school kids would repair the commune's tractors and *that* was the science class for the day. It's a great idea, of course. But then we'd sit down with the North Koreans and ask, 'What about those who don't want to do that?' And the North Koreans would tell us, 'Well, we try to re-educate them.' And then we'd ask, 'What about those who don't want to be re-educated?' Of course we knew what the answer was – they just were never heard of again. That's not what we want here.

"If you want a revolution by force, you spend all of your money on the army. But since we want a peaceful revolution, we spend our money on education. And we do want a revolution, a revolution of accelerated growth; we can't wait for growth which is evolutionary."

In addition to training primary school teachers, Morogoro Teachers' College brings back, at vacation time, teachers who take refresher courses in various subjects.

"In the past," Father John notes, "I would talk to them about King Charles the Fifth or someone like that and when I finished, I would ask for questions. They would raise their hands to ask questions like 'Why do Grade B teachers get paid so much less than Grade A teachers?'

"Now, they ask for books or nails so that they can themselves make repairs on their schools with the help of their students. And the kids today feel that it is shameful for a boy or girl of 20 to be fed like a baby, that it is shameful not to have produced anything for themselves by age 20. I have *seen* these things. And this has been done without changing the background of the kids, for economically and socially, they aren't much different than they were 10 years ago. Don't expect a revolution *there,* for still, more than half the population of the country doesn't go to school."

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If there is an educated elite in Tanzania, then it ca.. be found at the country's one university, the University of Dar es Salaam.

Youngest of all the faculties of the University is that of Agriculture. Before 1969, most university-level agricultural students in Tanzania were sent to Makerere University in Uganda for training. In those pre-*Education for Self-Reliance* days, agriculture was, for many, something to be studied only if all other academic options, for one reason or another, had been foreclosed. For those who did study agriculture, the ultimate goal was to secure an office job at the Ministry of Agriculture in Dar es Salaam, or at least, a position in front of a microscope in one of the country's four major research stations.

A few Tanzanians will admit that not all the old prejudices have been abandoned by the nation's youth. Many sons of the soil still struggle to escape the tyranny of the soil. At the same time, however, the old prejudices against manual labor are being broken down – albeit slowly.

Makerere University could not accommodate the increasing numbers of agricultural students from the three countries which make up the East African Community – Uganda, Kenya, and Tanzania. The Tanzanian Government, therefore, decided to establish its own agricultural college. Rather than construct a new school from the ground up, the Government took over the facilities of Morogoro Agricultural College

(which admitted students after only three years of secondary education) and incorporated the school into the national university complex in Dar es Salaam.

The first year's enrollment at the University's Agriculture School totaled 38; and if the students brought with them any elitist attitudes of the past, they were soon shed. The school handbook left little doubt about what was in store for them:

"Apart from the normal class time, practical work is assigned during the early mornings and evenings in the Livestock section in which the students do, *inter alia,* the actual milking, mixing of rations and feeding . . . and the cleaning of the animal units."

Nor were – and are – the three years of study limited to courses such as soil chemistry, farm machinery, and agricultural marketing. Consider, for instance, these course descriptions:

"**Capitalism and Industrial Development:** the origins and nature of modern science and technology. The successive stages of industrial revolutions under capitalism. Capitalist forms of production and class systems associated with them. The economic, social and political consequences of capitalist development in countries that have followed the system.

. . . "**Colonialism and its Impact:** The world economy set-up under colonialism and the dependent position of the Third World. The changing face and continued reality of Imperialism. . . . The impact of the colonial situation in economic development – town and education, labour and cash crops, population growth and administrative systems of East African Societies. Neo-colonialism implications for East Africa and Tanzania economic policy and development planning.

. . . "**Socialism, Liberation and Rural Development:** Emergence of socialist ideas and working class politics. The origins and experience of the Soviet and Chinese Revolutions – their approaches to industrialism, rural development, the class struggle and the liberation movement. The growth of nationalism in the Third World in the Twentieth Century and the continuing struggle for complete economic and cultural as well as political liberation from neo-colonialism; the significance of Southern Africa, Cuba, North Korea and Vietnam. The patterns of nationalism, and the differing involvement of education, urban and peasant groups in East Africa and the meaning of Uhuru, Self-reliance and Ujamaa policy in Tanzania."

The school year at the University lasts 40 weeks; each 40-week period is divided into four terms.

During their first term all final (third)-year students take part in a "field practical program" which consists of living and working either in ujamaa villages or state-run farms. A few work at government research stations. Midway through the term, or after five weeks, the students are transferred to a different region of the country so that they might become accustomed to Tanzania's varying soils, crops and peoples.

In the second term, the third-year students return to the campus, and the second-year students scatter about the countryside to work in the fields. They also return in ten weeks, to be replaced by members of the first-year class. All students live on campus during the last ten weeks of the school year.

"We think this is a good program," A. P. Uriyo, a lecturer in Agricultural Chemistry, says. "During their three years here the students go out for their practicals at different times of the year so that they can get experience during both dry and rainy seasons. They also see different parts of the country and thus can become familiar with the problems of cotton farmers or those who grow maize or fruit or those who fish for a living. We would like to see them out in the field for a longer period of time, but we find that even a ten-week practical is very expensive. Transportation is expensive, the tents they live in are expensive, maintenance is expensive."

After the students return to the Morogoro facility they are required to write a lengthy report on their activities in the field.

M.A.M. Maro, a lecturer in Rural Economy, and, like Uriyo, a holder of a Master's Degree in Agriculture from West Virginia University, adds, "The students have to do more than just report what they have done during their ten-week practical – anyone can do that. Of more importance are their reports on how they have tried to improve the life of the people living in ujamaa villages, or how they were able to improve milk production, on how they were able to reduce sickness among livestock. And if the students fail their field work – our faculty members here supervise all the field work – they can't continue their studies here."

University officials point out that as members of the country's elite, obligations are imposed rather than rights conferred upon the students. Significantly, they add, the students accept – and even welcome – the obligations, obligations that can be met only through service to the nation and to the people.

At the University, the students are given ample opportunities to serve the people. In addition to their 10-week practical, they are, while on campus, assigned to help nearby farmers or ujamaa villages with their agricultural problems.

Each ujamaa village in the Morogoro area (as elsewhere) decides what its weightiest problems are. The students' particular interests are then matched to the problems. Under faculty supervision, students work with the farmers – or, for entire villages – for the 30 weeks of the school year they spend on the Morogoro campus.

Still more: if a student remains unsatisfied, he is encouraged to teach adult literacy courses at night. Many do.

For his troubles, the fledgling member of Tanzania's new elite is guaranteed, upon graduation, a job, probably as a District Agricultural Officer. In turn, to repay part of the costs of his education (free from the moment he enters primary school; free board and room at second-

ary school; board, room and a monthly allowance at the university), the graduate must agree to remain in the service of the government for at least five years. (She, also: 12 of the 70 freshman students in the Agricultural College's 1972 class are women. They take the same courses as the men – no home economics majors for them.)

Thus, after 16 years of schooling, Tanzania's university graduates in agriculture are at the top of the heap. And – they are ready to serve.

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If the Agricultural Faculty of the University of Dar es Salaam at Morogoro is turning out the commissioned officers – and probably the future generals – to lead Tanzania's army of agricultural experts, then it is in the "MATIs" that the backbone of that army – its NCOs – is trained.

There are four MATIs – Ministry of Agriculture Training Institutes – in the country. The oldest, largest, and probably the most typical, is MATI Ukiriguru, located near the town of Mwanza in the northern part of the country.

Tanzania is a land of contrasts. The eastern coast is tropical, green throughout the year, hot and moist. Central Tanzania, an arid wasteland during the dry season, is hot during the day and cool at night.

That part of northern Tanzania bordering on Lake Victoria is different still – less humid than the east coast, but looking less like a moonscape than the country's midsection. King Cotton reigns here, enthroned on a land drained of nutrients.

Tanzanians, when they can get it, are rice eaters, and northern Tanzania – the Lake Region – is where most of the country's rice is grown. The people of the Lake Region, Wasukuma tribesmen mostly, prefer to grow more rice and less cotton, for more money can be made from rice. The Government has, with some success, discouraged the Wasukuma from becoming large-scale rice growers. Cotton, Tanzania's largest export (mainly to the U.K. and to China), is the country's largest earner of precious foreign exchange. With the introduction of new cotton seeds (UK-69) and the beginning of a $1,000,000 investment program of subsidized insecticides and fertilizers, the regional government hopes to increase cotton production from 160,000 bales in 1972 to more than 200,000 bales in 1973.

Like many other tribes in Tanzania, the Wasukuma live in single-family groupings rather than in villages. The families – they may be large, for Wasukuma men normally have two wives – live in circular, thatched huts, protected by circular sisal hedges. The pace of "ujamaazation" in the Lake Region has been slow. The Wasukuma have lived on their own plots of land for a long time, and when they aren't working in their cotton *shambas* (three acres average size), they tend to their herds of cattle. Cattlemen are suspicious of government claims of economic advantage to be gained by ujamaa living. They fear that the land

will become overgrazed if all live together. They also fear – and not without reason – that "my cattle" will in time become "our cattle" in the socialist life of the future.

So, in the whole Lake Region, there are today only 122 ujamaa villages with a total population of 8,000. "The villagers still own their own cattle and they still graze them separately. We move slowly in Tanzania," C. Y. Mpupua, the regional development officer, says.

"What we are aiming for," he continues, "is self-reliance. Self-reliance in clothing, self-reliance in housing and in food."

The people of the Lake Region – especially those pioneers in the few ujamaa villages – are fortunate in one respect: MATI Ukiriguru is nearby, and as in other institutions of higher learning in Tanzania, the students spend nearly as much time working in neighboring ujamaa villages as they do in the classroom.

It used not to be so. The school is an old one, established in 1939 by the colonial government. One didn't have to be smart to be admitted in those days; indeed, there were no entrance requirements at all. Or at least there were no academic ones. What counted for admittance to what then amounted to little more than a tribal finishing school, was who you were. Sons of chiefs got in automatically. So did sons of other important tribal figures.

Today, MATI Ukiriguru students are selected in the way students everywhere in Tanzania are selected: by passing an almost endless series of tests – the General Entrance Examination after Primary Seven, the School Certificate Examination after four years of secondary school, and then a two-month tryout in the field before entering a classroom.

A MATI student must have taken and passed courses in biology, chemistry, and physics in secondary school. When he (and again, increasingly she) sits for his School Certificate Examination, he fills out a form indicating his vocational preference: further secondary education (with the University of Dar es Salaam the ultimate reward), vocational school, or an agricultural (MATI) school. But though the Principal of MATI Ukiriguru says that it's not hard finding students to fill the classes, he doesn't take any chances:

"We have a recruitment program and send recruiters out to all the secondary schools in the country to tell the students what career opportunities there are in agriculture. Most of the kids don't have much of an agricultural background and so they don't know, and even those who know farming often aren't aware of what they can do in agriculture apart from working the land as their fathers might have done."

This is what a student learns from the recruiter:

A MATI graduate starts as an assistant field officer at 500 shillings (about $70) a month. Most certainly, the work is anything but glamorous. For at least two years he must live in a thatch or mud hut in a ujamaa village and give advice to villagers on crops, animal husbandry,

irrigation, and land use. If assigned to a village in the south, he is expected to be the resident expert on cashew and ground nuts. If he lives in central Tanzania, he must be expert in cattle and corn production and (increasingly) knowledgeable about the cultivation of grapes. In the Lake Region he must give advice on the cultivation of cotton. In the evenings, after work in the fields is finished, he probably teaches adult literacy classes. Health care is rudimentary, libraries either non-existent or stocked with books chosen for the newly literate. One consolation, however: he can save much of his monthly salary (for there will be little if anything for him to spend his shillings on), and food will cost him nothing for he is expected to be self-reliant in food production. Women assistant field workers work under the same conditions though Tanzanian men are no different from men anywhere – they dislike being advised by a woman.

"Women are really no problem," declares Mr. Matemu, the MATI Ukiriguru principal. "The men of the village mostly just build the houses, hunt, take the cattle out to graze, sit around and talk and drink, of course. Most of the actual work on the farms is done by the women, so naturally they take advice from our women graduates."

After two years, the assistant field worker is eligible for promotion to field worker. Though still working, as the name implies, in the field, he will be in charge of several divisions or even a small district (county). Promotion to senior field officer, in charge of a large and important district or an important technical service (irrigation, for instance) for an entire region comes next. After that – if there is an "after that" – comes advancement to the position of chief field officer and a desk job in the regional capital. A career man of average ability should find himself upon retirement, a senior field officer earning a salary of about $4,000 a year.

The Ukiriguru school is one of four MATIs in Tanzania. Others include a "sister" school at nearby Nyegezi (at which the girls outnumber the boys 161 to 66); a veterinary school whose campus is split, for reasons of space, between the towns of Morogoro and Mpwapwa, 100 miles apart; and MATI Tengeru, where students specialize in dairy cattle husbandry.

The basic MATI education lasts two years. First-year students at MATI Ukiriguru – after they have completed their two months of preschooling service at ujamaa villages or Government farms – spend their first five months at the school where lectures (in subjects as diverse as bee keeping and the mysteries of the internal combustion engine) and practical field work share equally 600 hours of instruction. Then it's back to the fields once more, to Tanzania's dusty ujamaa villages for a period of two months. Second-year students get more of the same: cattle, sheep, pig, poultry, rabbit, and goat husbandry; the sociological, environmental, economic and demographic causes of malnutrition; pasture and water management; political education (including several hours

devoted to the study of "Qualities of a Socialist Leader"); and even the use of photography as an aid in agricultural extension work. Students bicycle daily to neighboring farms and work for three hours with individual farmers during the second year; their work is supervised by car-driving members of the faculty. And – when they aren't working for the school, the students work for themselves, growing vegetables in private plots to sell in neighboring towns and the nearby city of Mwanza. The students receive an allowance of 45 shillings a month from the Government; most find that it's difficult to get by on what amounts to about 20 cents a day.

It is the goal of the Tanzanian Government to have one extension worker for every 500 farming families (the average size of an ujamaa village) in the country. Today, however, the ratio of field worker to farming family is 1 to 1,200 and government officials admit that farmers living outside the co-operative units have been deliberately neglected.

"The farmers will have to see for themselves the advantage of working together and living together" in ujamaa villages, Nyerere wrote. By helping those who choose to live in ujamaa villages while neglecting the others, the Government has made clear its development priorities. In

rebuttal to those who find this act of government triage cruel, Tanzanian officials argue, with some logic, that there just aren't enough trained extension workers to attend to all those needing their services. As President Nyerere explained:

". . . it would certainly be easier for the members of the villages to take full advantage of Government's services and to co-operate with their fellow citizens if they are living and working together in small groups. An agricultural field worker, for example, would be teaching new techniques to about 40 people together, instead of one family at a time; he could thus spend more time and give more expert help to the village farm than he could ever give to any individual farmer."

Even at this MATI, with its impressive farm of more than 1,000 acres (shared with a cotton research station), things go wrong. In October of 1972, the students discovered that their cattle herd, infected with brucellosis, might have to be destroyed. And a tour of the model chicken farm finds the hen house almost deserted: only a few weeks before, more than three-quarters of the fowls died from a viral disease. One cannot help wondering: if here, cattle and chickens die, what must it be like for the farmers in the villages, whose knowledge of animal husbandry and preventive medicine is at best rudimentary?

Almost 600 students graduate from the MATIs yearly, and Tanzanian officials are pleased – but are not contented – with the training the students receive:

"We need to improve our facilities," Mr. Matemu admits. "We need more equipment, more classrooms, but especially, more qualified teachers. We've had to use some assistant field workers here to give lectures, and though some of them may be good, it's not enough. It will take time, however." And he cites one problem that may be particularly difficult to overcome:

"Before, in the old days, preparing the student for the life of a field worker was relatively easy, even if the life he was to lead was hard. All we had to do was to teach the kids to be able to give the farmers accurate but basic information – when to plant his crop, how to irrigate it, how to use pesticides. But now, with ujamaa villages, the most important thing we can do is to help in the planning function of the village – how to plan a system of land use, how to set up economic models for this activity and that. We don't yet know if we can do that job. We shall see."

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It is particularly fitting – given the ideological framework upon which the country is stretched – that Tanzania's war against rural impoverishment is, to a great extent, a "people's war."

Not only the country's leaders and decision-makers, but the peasants, too, a Division of Rural Development pamphlet states, "must be ex-

posed, oriented, and emotionally and psychologically charged with the fire and enthusiasm for building a socialistic way of life."

The exposure, orientation and charging of the peasant farmer take place in Tanzania's Rural Training Centers. It is in the Rural Training Centers that the people from the ujamaa villages learn the whys of this new Tanzanian experience, and as important, the hows.

To reach RTC Humbolo, one heads eastward by dirt road from Dodoma, the principal town of central Tanzania, across plains choked with red dust, where flourish only the ancient and grotesque baobab trees, which, with their giant trunks and stunted limbs, rise from the vast plateau like giant arboreal thalidomide-induced accidents. Occasional road signs point the way to tube wells which provide the region's most precious resource — water; herds of emaciated cattle forage for food amid tangled briar patches; men work on a rig drilling for water. The bit has reached 620 feet and has yet to strike water. Here, amid seeming nothingness, is RTC Humbolo.

"It is a fact," the Rural Development Division pamphlet says, "that . . . Tanzania's rural sector, employing about 95 per cent of the population, contributed only about 40 per cent of the country's Gross Domestic Product." This lack of productivity, the report says in a model of understatement, "has something to do with the lower level of skills possessed by the rural community."

It is to Humbolo and other Rural Training Centers like it, that Tanzania's peasants come, to learn why breast feeding contributes to a baby's health, to learn of the four kinds of "exploitation and their evils" (feudalism, capitalism, imperialism, and parasitism), to learn how not to abuse tractors, and to learn how to "make and fix a window, a door, a chair, a table, a roof, to plaster, to make a pot."

Though the countryside lends itself to gloomy thoughts in this tag end of the dry season, D. S. Kiobya, Principal ("Project Leader") of Humbolo, is a man in whom overflows floods of contagious optimism. This year his enthusiasm is particularly acute, for viticulture has begun to take a fast and financially lucrative hold in some of the ujamaa villages which dot the dusty plains of Dodoma Region. (Grapes require little water and a Dodoma winery has been built to turn the harvest of 3,000 acres in grapes into bottles of Dodoma Red and Rosé wine.)

"In the past, many of the people here had no cash. None. Their per capita incomes were zero. Nothing at all. Now, many are learning to grow grapes and they have incomes for the first time in their lives. People can get 6,000 shillings an acre in a good year, and they can grow two crops a year.

"I should apologize that there are no students here now," Project Leader Kiobya says. "The center has been closed down for vacation and the students are returning tomorrow night.

"They come from all over this region, all ages, both sexes, the illiterates as well as the primary school graduates. We teach courses here, some of which last only a week – those are mostly in political education for village chairmen and the like. Some courses like in smithery, plumbing or animal husbandry, last as long as six months."

Though RTC Humbolo is seven years old, its facilities have been taxed only since 1970, the year in which massive ujamaazation in the Dodoma Region was first begun. In the past two years, more than 2,500 farmers have been trained at Humbolo.

"At first," Mr. Kiobya explains, "the farmers in the area didn't want to come here, especially when they were scattered about the countryside and were not living in ujamaa villages. It was only in 1969 that the Government decided to try very hard to get everyone to come together in these communities. By 1970, the rural development staff had demarcated the whole district into ujamaa villages, including building sites. Last year, 25,000 families moved into the building sites and this year, another 25,000 have moved. Now, it's difficult to accommodate everyone here at the center who wants to come." (The Tanzanian Government would like to provide accommodations for a minimum of 80 people at each center. Only slightly more than half this number can be housed at Humbolo.)

There are Rural Training Centers in less than half of Tanzania's 64 districts. Money is one problem – each new center costs about

$200,000 to build. So is the lack of trained teachers. Though RTC Humbolo has a staff of 34, only eight are employed as instructors.

"At first, the training wasn't very good," admits Mr. Kiobya. "The farmers couldn't use the skills they were taught because they lived in scattered communities. Now, in the ujamaa villages, it's much better. There, the people have the equipment so they can practice what they have learned here.

"You don't *have* to have a good system of ujamaa villages to have a successful Rural Training Center, though that's the way it works here. For example: in the Kilimanjaro Region (in northeast Tanzania), there are only a few ujamaa villages. The Chagga grow tea and coffee on their individual ***shambas,*** and it's hard to get them to leave their homes to move to a new location. But even the Rural Training Center there performs a valuable function by teaching the people how to prune their coffee trees better, how to pick the tea better. The main thing everywhere must be this: what the people learn must be applicable to the work of their daily lives.

"Here in Dodoma, the problem is famine. The rainy season lasts only 3½ months. And we only get about 26 inches of rain a year. So obviously, one family by itself cannot build a water tank to store water. In the ujamaa villages, a giant water tank can be built for the benefit of all. With the people gathered in one spot, we can teach them how to diversify their crops, how to grow cassava and grapes which are good crops in times of very dry weather. The people of this region raise cattle. Before, families were scattered all over and we didn't have enough extension workers to go around to help them all. Now, the people can be convinced to sell before the cattle die in times of drought, and together they can reserve enough hay to get through dry spells."

Village officials, elected by their townsmen, are automatically sent to the centers for training. Chairmen are taught how to hold meetings, how to choose committees; treasurers learn how to keep books. The centers' other students, peasants mostly, are selected by village field workers and local officials. Courses are taught in Swahili so that illiterates can benefit from the instruction.

The Humbolo center has three dormitories, a kitchen and mess hall, a recreation and library hall, workshops, housing for the staff, and a vegetable and animal farm which is managed by a paid farm manager. In one machinery shed, stands a lone and unusable tractor; for four months, the center has been waiting for delivery of a spare part which would make it operable again. Additional sheds, used for carpentry and masonry classes have been constructed by the students. They have learned well, these village officials and illiterate farmers.

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Offices of the major government departments in Dodoma Region are housed in an old, stone building which looks like a fort with nothing to

defend, a relic of the pre-World War I age in which Tanzania was a German colony. In spite of its crude quality, the building is not without at least one redeeming quality: its thick stone walls bar the afternoon heat from penetrating the high-ceilinged, spartanly-furnished offices.

Though the working day ends at 2:30, the regional development officer and his assistants often stay at their desks until dusk. Only a few months before, President Nyerere had decentralized the Government's national ministries; now, for the first time, the 18 regional governments are responsible for the formulation and implementation of their own development programs.

"Our nation is too large for the people at the center in Dar es Salaam always to understand local problems or to sense their urgency. When all the power remains at the center, local problems can remain, and fester, while local people who are aware of them are prevented from using their initiative in finding solutions," Nyerere wrote.

Things were so bad, Nyerere went on to say, "that in the Districts and Regions, local officials cannot get answers to their letters (to the national government) at all. They write and write, sometimes five times, and hear nothing, yet it is impossible for them to visit Dar es Salaam . . . without permission – which they cannot get.

"Decentralization means trusting people," Nyerere concluded. It also meant placing enormous burdens upon the country's regional administrators. Local expectations were instantly raised, though the regional development directors quickly pointed out that decentralization would *not* mean extra money for development projects. What decentralization did mean, they said, was that regional projects would more closely follow local desires, and that projects, once approved, would be implemented more quickly.

Decentralization put inevitable strains on Tanzania's undermanned civil service, which, as in all developing countries, is staffed with an absolute minimum of quite capable men at the top, and which tails off sharply in efficiency as one descends the lesser rungs of the governmental ladder.

Overworked, underpaid, understaffed, and without sufficient resources, regional directors now often work into the night.

In Dodoma Region, the major constraint to development has always been a lack of food; government has sought to end the problem through ujamaazation. "There's only one way to go here and we are determined to develop," asserts Dodoma's Regional Development Officer.

"The first thing we are trying to do," he says, "is to end famine. Few people have died – it's not like in India. But since 1921, the various governments of our country have had to spend money to feed the people of Dodoma, to keep them from starving. If there had been no aid, the people here would have died.

"If the rains come, then we are all right. But in every five-year span, there will be insufficient rain in three of those years. So we have to

work day and night to get ahead. If we didn't think we could get ahead, then we should be bold enough to refuse to accept the challenge. We believe that the only way to alleviate the problems of this region is to bring the people together into ujamaa villages, to give them expert assistance, and to guide them and to help them plan their work.

"Some villages, true, have been planned hurriedly. But we must hurry or we will face famine once more. Our goal is that in five years, no more money should be spent in helping to feed the people. So we must work quickly.

"Pressures have been brought to bear on the people to live in ujamaa villages. But here, there was little opposition, for the people never developed any great attachment to living in a particular location. It's easier, therefore, to get the people to move into villages here than it is in the Kilimanjaro Region.

"We have made mistakes. Some villages, for instance, are without sufficient water or the water is too salty for human consumption, though it is acceptable for crops. We have to provide storage tanks for water and deliver water to some villages every week.

"Why did we plan so haphazardly? Well, there are only 60 water drilling rigs in the whole country and often it takes a long time to get good water. If we waited until each ujamaa village site had good water, the program would have been set back several years. As it is, last year, every drilling rig in the country was used in the Dodoma Region. But the problems of famine – often due to the scattered nature of the population – were such that we felt we couldn't wait until a proper source of water was found in each case.

"We are only in our second year of ujamaa villages, and so, though we may have more villages than any other region in the country, we are just in the first stage, really – collecting the people.

"It's a difficult task. Water must be provided, then schools and dispensaries. The people all need assistance – not money, but guidance. But we haven't made any unnecessary assumptions. One such assumption that we have *not* made is that Tanzania will have a lot of benefactors. We shall never assume that. We would like to have good will, but even with good will, our problems will not stop. We never assumed that the task would be easy.

"Our problems, our tasks, are like those in getting married – it requires a long commitment. A country is like a child; one must be worried all the time. When the child is in the mother's womb, you worry if it will be born healthy. And when it is, the problems do not stop there. You begin to worry if it will survive the first few months, and when that problem passes, you worry if the child will hurt himself learning how to walk. And on it goes. Even when your child is grown, you worry if he will choose a good wife, if *his* children will be all right. So: when we solve one problem, it does *not* mean that we can relax. We will never relax, because there will always be more worries ahead.

"The thing to do," he concludes, "is to look at some of our villages. I would only ask that you remember that they are, at the oldest, two years old."

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Off into the bush, again by Land Rover, bumping across little-used trails, dust everywhere. Deserted mud huts sit crumbling in the sun, abandoned by their former occupants for life in the ujamaa villages. Stream beds filled with sand. Baobab trees, bare and brooding. Herds of goats and cattle tended by small children. And villages, with names like Mbabala (A), Mbabala (B), and Ibugule.

A new settler can choose the ujamaa village in which he wishes to live. Government assistance in relocation consists of transportation by truck from his former hut to the site of his new one. During the first year, the settler builds his new house while living in the old one. Crops are grown and cattle raised at the old homestead. In the second year, the family moves. Most settlers choose to live in the village nearest their old dwelling places, and with their own tribal clan. Such wishes can usually be granted, and thus the new villages are formed by homogenous groupings of people.

Four hundred fifty families now live in Mbabala B. The village is two years old. During the first year, 35 Wagogo families were persuaded to grow grapes as a cash crop. Earlier this year, the first harvest was gathered and the families earned 5,000 shillings from their one and one-half acres of vines. For the thirty-five, it was the first time they ever had cash. Now, more families in Mbabala B are joining in the cultivation of the grape. Fifty-four acres of trenches have been prepared with the aid of two tractors.

The vineyards of Mbabala B are almost the only green touches to an otherwise gamboge landscape. Though the fences on which the vines cling are tatterdemalion, they are sufficiently sturdy. The grape leaves glisten in the sun; small clusters of grapes, the season's second crop, are beginning to appear. The residents of Mbabala B are becoming farmers with cash in their pockets. There is talk of constructing a community center in the village.

In the nearby village of Ibugule, population 350 families, there is a community center, standing grandly in the midst of rectangular mud huts. One of these huts, bigger than the others, has a wooden cross stuck into the mud above the archway of the one door. It is the village's Catholic church. The community center, built of cement, is large and blindingly white. Here, in this U-shaped building, is the village meeting room, in which development plans are discussed and communal profits (when they occur) are distributed; the office for the village chairman; a classroom for literacy classes; a reading room; a dispensary; and a commissary.

The commissary's shelves are filled: cigarettes, aspirin, hair oil, beer, tea, razor blades, pencils (Great Wall brand), ink, dishes, padlocks(?), plastic sandals, tin jewelry, and batteries for transistor radios.

Each family in Ibugule – through a one-time investment of 15 shillings – is a part-owner of the store. The uses to which yearly profits are put are decided upon by the village "stockholders." Last year, the villagers bought books for the reading room and medicines for the care of their cattle.

The people of Ibugule make their living from cattle. Market day is held once a month here, and buyers from Dodoma's packing firms come to look over the beef, to swap stories, and to drink. People in Ibugule say that life is hard but good. There is enough water in the village well, and they are thankful for that.

In the late afternoon, a group of about 40 men and women gather in the community center classroom. They are learning how to read.

* * * *

Those 40 are among the 1,400,000 Tanzanians who are now learning to read and write Swahili. A crash program aimed at eliminating illiter-

acy by 1975 was begun in 1968. The Government's goal will not be reached, but a start, more than modest – and certainly almost a million and a half people is that – has been made.

Headquarters for the nation's literacy program is a rambling colonial building hard by the banks of Lake Victoria in Tanzania's second largest town, Mwanza. Here, with a professional staff of 19 Tanzanians and four advisors from Unesco, plans for eradicating illiteracy in the country are laid out.

"We don't feel that it is enough to teach literacy," says Z. J. Mpogolo, National Deputy Director in the Project Office, and the senior Tanzanian official involved in the campaign.

"Our experiment (it has cost the UNDP [United Nations Development Programme] $1 million since 1968 and the Tanzanian Government $6 million in the same period) has, so far, been mostly confined to the area here around Mwanza. We are ready to go nationwide with it now. The experiment deals with functional literacy, the teaching of vocational skills as well as literacy skills.

"Why should a man who has lived for, say, 50 years without learning to read and write, learn to do so? What can he get out of it? What incentives are there for him to continue being literate? We think that we have found the way."

Tanzania's way – with help from Unesco – has been to teach illiterates, through basic primers, how to grow better cotton in Mwanza, for example: how to take better care of cattle in Dodoma Region; how to gather in a richer harvest of fish on the Indian coast. Elsewhere: primers on the care of bananas, on tobacco and rice-growing.

The first day of literacy classes in a village in the Lake Region. On page one of the primer are a large sketch of a cotton boll and drawings of the country's paper money and coins. "Pamba" is the caption under the former, while "Pesa" is printed under the latter. Then, below, two illustrative sentences only: "Pamba ni mali" (Cotton is wealth) and "Pamba huleta pesa" (Cotton brings in money).

The literacy class, which has about 30 students, most of whom are men, will last eight months. Three two-hour classes are held each week. Ten thousand teachers around the country have been trained to teach literacy classes. Adult literacy instruction is a compulsory extra-curricular exercise for primary school teachers; it is also compulsory for civil servants. In villages served neither by teachers nor government officials, primary school dropouts are pressed into service.

"We *try* to get someone from the community itself to teach the classes," says Mr. Mpogolo. "That way, instruction will be better accepted by the people. In the case of government officials from the outside, there is no problem of acceptance, but when others from outside the village teach, there are problems: the men of the village will most often refuse to allow their wives or daughters to attend because – well, you know."

For five years, Lake Region has been the special target of the Literary Project Office. Eight years ago, the region's literacy rate was 14 per cent. Today, it stands at 67 per cent. A total of 300,000 people are now attending 10,000 classes in Lake Region, many of them in advanced literacy courses.

"We don't stop after one eight-month course," explains Mr. Mpogolo. There is a second course, also of eight months' duration, for the new literates. At the end of this course, the literates should be able to read and write at a fourth grade level.

"There are problems of drop-outs," he admits, "particularly in the second year. The people think that once they can read and write just a little, they have learned all that is necessary. So it's hard to get them to continue. Nevertheless, we are able to persuade 60 per cent of the students to come back for the second year courses."

But even after a few months, most cotton farmers can read well enough to learn to "chagua pamba safi na chafu unapochuma shambani" (sort the dirty from the clean cotton when you pick it at your farm), to "uza pamba yako mara kinapopatikana kiasi cha kutosha" (sell your cotton as soon as you have enough to sell) and that "usipouza mapema pamba yaweza kuchafuka katika stoo" (if you don't sell early enough, the cotton may rot in the store).

On the other hand, fishermen on the coast advance from such modest beginnings as "fish is better food" to "it is not easy to get rid of the middleman in the fish business. The only way to get rid of him is to form a co-operative. Co-operatives are death to the middleman."

Ranchers who begin with "Let us raise cattle" soon learn not to "sell your cattle at home or you will be swindled."

Rice growers who surely knew, but were not able to read, that "Mpunga ni zao" (rice is a crop) learn that if you "polish the rice grains you may get more money" and that "if you sell your rice in a co-operative, you may get a better price."

The Literacy Project Office is at some pains to ensure that its students, wrested from illiteracy, will not slide back into their former state. Supplementary reading materials have been printed in Swahili – there are almost 200 titles at the present time – and are distributed to reading rooms in ujamaa villages. Most of the titles are functional in the extreme: simple books on the use of pesticides, on how to treat minor cattle diseases. A few books of poems and fables have been printed, however. Last year, the Project Office encouragingly (but vaguely) noted in one report that "a number of new literates . . . are using the libraries and (are) borrowing sometimes up to five books a month."

A network of rural newspapers is also planned, but here, the same report admits, "the situation is not a happy one." Machines break down, and months are wasted in waiting for the replacement of spare parts; other items of higher priority command greater attention; and the costs are, for Tanzania, excessively high.

The expense of a national literacy campaign will also be great, and some officials worry that money will not be available from the UNDP to carry out the work.

Y. Vishnyakov, Unesco's Chief Technical Advisor, is among those who worry. "Literacy is hard to quantify," he says. "People will often compare the returns on a literacy project with those of a power station. They don't realize that in the long term, literacy is more important than a power station. But it is hard to convince people of this."

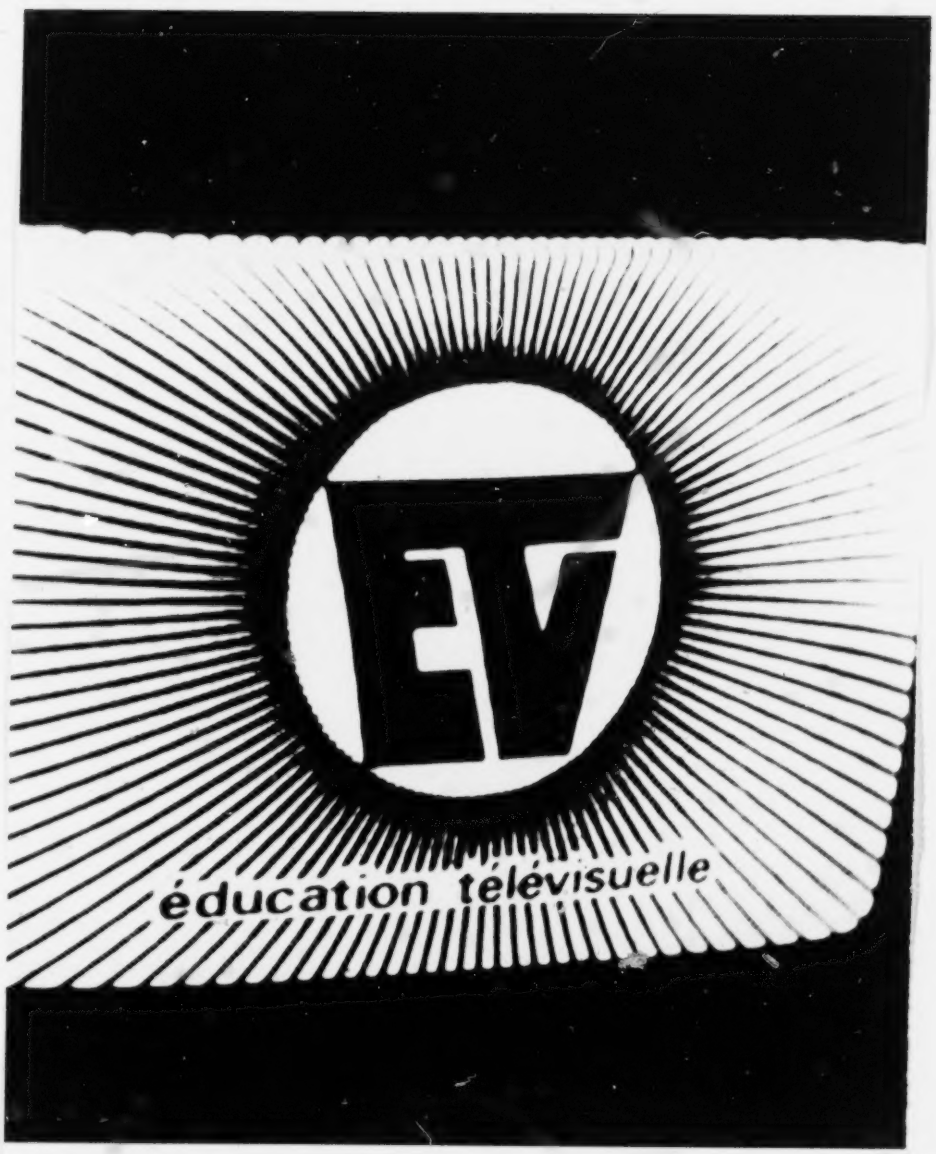
The Project Office (and Unesco) feels that enough time – the past five years – has been spent in experimentation in Lake Region, and that now, the program must embrace all of Tanzania. Six trainers from each of the country's 17 regions have already attended a two-week seminar in literacy/vocational training. In turn, they have prepared others to carry on the work in their regions. All that is needed now is the money.

* * * *

"Nowhere in the world is there an illiterate peasantry that is progressive," John Kenneth Galbraith once wrote. "Nowhere is there a literate peasantry that is not," he added. Adult literacy forms the last link in the chain of educating that 96 per cent of the people living as peasants in one of the world's poorest nations. The chain, linking both university graduates and unschooled farmers alike, appears strong, though in reality it is quite fragile.

It will be with these people on the land that the Tanzanian experiment – and it must be called an experiment – in self-reliance will be won or lost. The experiment is an exciting one, but part of its excitement comes from the realization that it might so easily fail.

The IVORY COAST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INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT

1818 H STREET, N.W., WASHINGTON, D.C. 20433 TELEPHONE: EXECUTIVE 3-6360

Bank Press Release No. 70/16
March 25, 1970

Subject: Educational TV 'First' Announced by World Bank

School children in the Ivory Coast will learn through television, thanks to a new educational project just announced by the World Bank.

For the first time in its history, the Bank is helping to finance construction of a nationwide instructional television production center in Bouake, second largest city in this West African nation. Pilot programs are expected to be offered next year. Ultimately, more than 700,000 pupils, grade one through six, will have televised instruction.

The Bouake center is part of a broader $19 million educational project designed to expand and improve teacher training, primary and secondary education, vocational and technical instruction over the next five years. The Bank is providing $11 million to cover the foreign exchange requirements. The loan will be for a term of 30 years, including 10 years of grace, with interest at 7%. The Ivory Coast Government is financing local currency costs equivalent to $8 million.

The project was formulated as a result of extensive studies over the last few years by the Ivory Coast Government assisted mainly by the United Nations Educational, Scientific and Cultural Organization (Unesco), the French Aid and Development agency (FAC) and the French National Television Agency. In addition to FAC, agencies which will provide additional financial or technical assistance for the instructional television scheme include Unesco, the United Nations Development Programme, the United Nations Children's Fund, and the European Development Fund.

World Bank President Robert S. McNamara said that the television project illustrated the Bank's conviction that new educational technology can, if

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carefully designed and efficiently used, contribute significantly to the learning process and, thereby, help overcome one of the most stubborn bottlenecks in development efforts.

The Ivory Coast has a national televison network, linking major population centers which will provide a convenient conduit for educational programming. An instructional television scheme in Niger, developed by the French Government, has been operating about four years. It helped stimulate new techniques for adapting educational technology to the special needs of less developed countries and will serve as a model for the Ivory Coast.

In addition to providing funds for the Bouake center, the Bank loan of $11 million will be used to:

> Construct and equip 11 schools with an enrollment capacity of 6,500. Three of these schools will be primary teacher training colleges; three will be general secondary schools; two secondary technical schools; one vocational school for adult accelerated training and two post-secondary technical schools -- one for agriculture and one for industry and commerce.
>
> Finance studies of curricula reform and of cost reduction possibilities in secondary education; pay for consultant services for design of school buildings and supervision of construction; finance management consultant services for the instructional television system and part of a built-in evaluation of the scheme; provide technical assistance and fellowships and establish a project coordination and supervision unit within the Ministry of Education.

The new education program to be assisted by the Bank is designed in part to introduce more flexibility into the system, and to provide more pertinent education with emphasis on vocational and technical subjects. This will increase the nation's supply of trained manpower. A central objective is to almost double the number of public school teachers (there were about 7,000 of them in 1967-68) and to increase sharply the level of school enrollment in primary grades. Only about 44% of the 925,000 children, aged 6-11, attended school in 1967. This is to be increased to 70% by 1975.

Though the Ivory Coast is one of the "richest" countries of Africa, it sometimes is difficult to understand how a country, whose annual per capita gross national product comes to but slightly more than $250, can be considered rich in the traditional sense.

Perhaps its reputation for affluence has been due to the fact that most visitors seldom leave the confines of Abidjan, the country's startlingly modern capital. Perhaps it's because the visitor puts up – if he has made reservations well in advance – at the Hotel Ivoire, where he may eat well-prepared French cuisine in the 23rd floor rooftop dining room, play *chemin-de-fer* at the hotel casino, skate at the hotel ice rink, see the latest French movies at the hotel cinema, bowl at the hotel bowling lanes, and swim in the hotel's huge swimming pool. Or perhaps it's because the visitor may spend an hour at a French-owned outdoor cafe in the Plateau section of the city, sipping a *citron soda,* while gazing at Abidjan's gleaming white skyscrapers and inhaling the noxious fumes created by the city's traffic jams.

But there's more – and less, too – to the Ivory Coast than meets the eye.

One does not have to leave the Abidjan area to get the flavor of the "other" Ivory Coast. The spacious parks and houses of Cocody and the shops with their imported goods from France on the Plateau, are a long way – in everything but distance – from the grimly-named suburb of Deux Cents Vingt Logements. And the world of Deux Cents Vingt Logements is far different from the rural world in which 80 per cent of Ivoiriens still live. Here, a yearly income of $250 is beyond the reach of most, and it is from here that Ivoiriens migrate, rural moths in search of the urban flame.

The record of the Ivory Coast in economic growth has been so often praised, at least by traditional economists from the developed world (during the 1960's, economic growth increased in real terms by 7.5 per cent yearly), that its history need not be elaborated once again.

In a single paragraph, for instance, the University of Michigan economist Elliot J. Berg managed to describe recent Ivory Coast economic history as "dazzling," "staggering," "magnificent," and as one that has been "matched by few countries in the world."[12]

The key to the country's economic success, he wrote, has been the guidance of the economy by "gradualists."

"Gradualists," Mr. Berg explains, "emphasize outward-looking growth and the potentials of the export factor, focus on peasant agriculture, the importance of individual incentives, and the use of the market. They are more kindly disposed toward private capital, both foreign and domestic, and give a smaller role to the state in the development process. They are rather more concerned with efficiency and growth than with equity in income distribution."[13]

The Ivory Coast's economic growth – which has slowed somewhat in recent years (5.5 per cent in 1970, 3 per cent in 1971) – has not eradicated all the country's many problems. The rich, expatriate community of French, which now numbers more than 40,000 – double the pre-independence figure – earns almost two-fifths of total wages paid in the country. Almost 95 per cent of industry in the country is in the hands of the French; more than two-thirds of all persons in executive positions in the country are expatriates. Even in Abidjan, less than one-fifth of all retailers are Ivoiriens.[14]

Urban unemployment is high. Not only are rural Ivoiriens drawn to Abidjan; immigration from neighboring countries – mostly from Upper Volta – is heavy, and 500,000 immigrants fill most of the unskilled positions throughout the country. As the French fill the positions at the other end of the social and economic scale, Ivoiriens position themselves between the two extremes, happily in the former instance, unhappily in the latter.

The Ivory Coast's stable Government – it has been led by President Felix Houphouet-Boigny since independence in 1960 – has fostered, and with great success, a development program aimed at creating a climate favorable to foreign investment, and in the process has not permitted national pride to go before the country's economic fall. But Ivoiriens from all regions of the country and from diverse economic backgrounds have not yet shared equally in the fruits of the nation's post-independence labors.

In order to rectify the situation, the Government has directed its energies, in drawing up its second Five-Year Plan (1971-75), to the reduction of regional disparities, the diversification of agriculture and industrial output, and to the enactment of measures to improve the conditions of life – education, housing and health – throughout the country.

As elsewhere in Africa, leadership in the Ivory Coast "conceives of formal education as a major independent variable in stimulating economic and social change."[15] Almost one-third of current Government revenues are currently spent on education. Nonetheless, the pace of educational development has not matched the country's economic growth, and the necessary presence of so many foreign nationals in high-level positions in the country (necessary because there are too few educated Ivoiriens to fill those same positions) has proved to be expensive – financially as well as psychologically.

For a country as relatively affluent (in African terms) as is the Ivory Coast, it is surprising to learn that here, the literacy rate is less than 20 per cent. Fewer than half of all school-age children ever go to school. Those who do enter primary school are subjected to an almost unending system of year-end tests which determine the rights of passage to the next grade. These tests can be varied in difficulty by the Government as it wishes, depending on its projections of manpower needs for

the future. Dropout and repeater rates of students in primary schools are high. And there is yet one more factor which makes success in education precarious for the young Ivoirien: all courses are taught, from the first day of the first grade, in a foreign language – French.

There are, some estimate, more than 60 different languages spoken in the Ivory Coast. No one language is predominant; thus, from this tribal tower of Babel has arisen the necessity of teaching the country's children in a foreign language.

In theory, all children have an equal chance to advance through the Ivoirien educational maze. In practice, however, children who live in urban areas where French is commonly used by educated wage earners, where French signs are hung in shop windows, and where French-language telecasts can be seen, adapt more readily to instruction in French than do the sons and daughters of rural peasants who may never have heard or seen a word of French before they begin their schooling.

The Ivoirien system of education is in many ways, similar to the French, with a scholastic framework composed of a six-year primary level course, a secondary level divided into cycles of four and three years, and a final, university level.

It was not always so: "In virtually no respect did the pattern of education . . . in prewar Ivory Coast resemble the metropolitan system."[16] After independence, however, Ivoirien leaders, who felt that education had been neglected during French rule because it did *not* follow French patterns, decided to right the wrong by following closely, the educational system of their former colonial master.[17]

Curriculum changes were introduced into Ivoirien schools reflecting the fact that the country was both independent and African. But, as Clignet and Foster point out, "it is questionable whether radical transformation is possible in a system where over 30 per cent of students at the baccalaureate (13th year) level are expatriates and where the practical direction of educational policy is still largely in the hands of French administrators."[18] Africanization of curriculum, they concluded, has long been of considerable concern in the country; for Africanization of teaching methods, there has been little interest.

It is doubtful, even if it could be achieved, if the Houphouet-Boigny government would ever wish to institute truly "radical" reforms, for radicalism is alien to the Government's way of thinking. The Ivoirien Government is, if nothing else, pragmatic; it realizes, for instance, that in the long run, it cannot continue to rely upon expatriate labor to fill high-level positions, but it also believes that in the short-run, Africanization of those same positions should not be filled in an abrupt and precipitous manner. Changes in the Ivory Coast are usually evolutionary.

Thus, for the most part, educational reform in the Ivory Coast has been just that – reform; curriculum is changed to reflect more than African experience; additional vocational, technical and normal schools are constructed.

Only in the country's primary schools is there evidence of what might be called a "radical transformation"; that transformation is as ambitious as it is fascinating, for it involves the use of television as a medium of instruction.

Instructional television is not new. It has been used, in the past decade, in many countries both rich and poor. Cited most often by those involved in the development of educational policies as paradigms of the use of instructional television are the systems in American Samoa, El Salvador, and Niger. Each of the three quite different systems pre-dates the one in the Ivory Coast, and therefore, those who planned the educational television system in the Ivory Coast could pick and choose from the three those features which would best serve the country's needs.

Instructional television in American Samoa dates back, in its inception, to the 1961 appointment by the new American President, John F. Kennedy, of a new territorial governor. The governor found, upon his arrival in the Pacific trust area, that students who had completed high school fell three to seven grades behind American students on standard tests, and that their Samoan teachers fared little better. Nonetheless, certain guidelines limited the governor's options in re-casting the nature of education in American Samoa: schools had to conform to those in the United States, and classroom instruction had to be in English.

Wholesale importation of American teachers (one option) was felt to be both financially and culturally insupportable; training of Samoan teachers in the United States (a second option) would not have solved any problems in the short run. It was decided to turn to television to remedy the situation.

Instructional television, as it evolved in American Samoa, had features which discouraged its use in the Ivory Coast: television instructors were American, and the education the Samoan children received was essentially an American one. Ivory Coast planners — aided by advisors from Unesco, rejected this approach. They also felt less than comfortable with the American policy of strictly rationing grammar and vocabulary to the students. Unesco consultants noted that because of this policy, Samoan school children, as well as their teachers, feared to make mistakes in conversation, and therefore seldom strayed from previously-learned patterns of speech and vocabulary words.[19]

Nor did the system in use in El Salvador prove to be entirely relevant to the Ivoirien experience. Educational television in that Central American republic was restricted for use in middle schools; the Ivory Coast determined early that its system was to be used in primary schools. In addition, there were no language barriers in El Salvador: pupils were Spanish-speaking from birth, and televised lectures were, of course, in that language, quite different from the case of the Ivory Coast.

The example of Niger, however, proved to be of great value in planning an ETV system for the neighboring country of the Ivory Coast.

In Niger, as in the Ivory Coast, an acute shortage of qualified primary school teachers existed – more so in the former than in the latter. In 1966, only 66 teachers in Niger had finished secondary school. In Niger, as in its neighbor, children were taught in a foreign language – French – from the beginning of their schooling. And in Niger, instructional television was looked upon – and was used – as a tool to make education relevant to the needs of the country's primary school children.

The Niger experiment – financed by the French Government – began in the 1965-1966 school year, and was confined to two schools, via closed circuit television, in the Niamey area. Four programs, lasting 15 to 18 minutes each, were beamed to the two schools daily. The best teachers in the country were used as television teachers; classroom monitors, many of whom had only an elementary school education, handled most of the classroom instruction between televison transmissions at the two schools.

Unesco consultants, evaluating the Niger program, were enthusiastic over the results. The students at the two schools learned French better and faster. Verbal expression soon outstripped that of students at schools without television. Classroom activities in the two schools generated a spontaneity rarely known in non-television schools, where the emphasis was on rote learning from inadequate teachers.

Plans were made to extend instructional television to all parts of Niger, and to encompass, by the 1969-1970 academic year, 500 schools with 40,000 pupils. These hopes failed to materialize, however: in 1969, educational television reached but 20 classes with a total of 800 students. Plans for a national scheme were dropped. A Unesco report mentions two possible reasons: a growing belief in Niger that gradual development in education was preferable to rapid development, and a sudden awareness that the shortage of qualified secondary school teachers (whose number was to be augmented by qualified primary school teachers "liberated" by television from their primary school duties) was not as acute as previously believed.[20]

Notwithstanding the problems encountered in Niger's instructional television system, the Ivory Coast decided to cast the future of its ETV program along Nigerien lines. Rightly or wrongly, the syllogistic thinking of the time proved irresistible: because ETV worked in 20 schools in Niger, it could – if it would – work nation-wide in Niger; if it could work nation-wide in Niger, it would surely work even better in the Ivory Coast.

* * * *

The primary school in the village of Kouassibileko has five classrooms, one for each grade. (A sixth will be added in 1973). The school building is one-story high, constructed of cement, and is built in a straight line. Architecturally, it is not an imposing building. On the

other hand, it is the most imposing structure in Kouassibileko, a village of 2,000 people located not more than 10 kilometers from Bouake, the country's second largest city.

Depending on the source, the population of Bouake is said to be anywhere from 50,000 to 150,000. The road between Bouake and Kouassibileko is a good one and is being upgraded. By car, one can travel the distance between the two places in about ten minutes.

In front of the school is a tall – perhaps 60 feet in height – television antenna. It's hard to find a primary school in the Bouake area that isn't wired for television.

* * * *

The Ivory Coast's request for help in both setting up and financing its system of educational televison drew quick and favorable responses from many sources. By mid-1972, assistance totalling more than $4 million had been received from Unesco, the United Nations Development Programme, the World Bank, UNICEF, the European Development Fund, the World Food Program (under FAO auspices), and the Governments of Canada, France, Germany, Italy and the United States.

Though the headquarters for the Government-run television network is located in Abidjan, Ivoirien officials decided to locate the educational television production center in Bouake, some 200 miles to the north. Programs initiating in Bouake are transmitted to Abidjan, and from there, are re-transmitted to six other principal locations, ensuring (on paper) coverage to nearly all the nation's primary schools.

Televised education was begun in 447 schools for some 20,000 students in their first year of primary school in October, 1971. Included in the first year's coverage were primary schools in the populous Abidjan area in the southeast as well as schools located in a belt across the mid-section of the country. Television schools existed neither in the poor, northern region of the country nor in the populous southeast.

* * * *

There are no educational television transmissions during the first week of the school year. Most of the time is spent by the teachers in filling out forms; and, as in schools everywhere, a genial chaos reigns. The children, therefore, have a week to become accustomed to the sound of French before they begin their televised lessons. Teachers are assigned to schools away from their native areas so that they might not be tempted – even should they wish – to make explanations in a language other than French.

By the time the second Monday of the school year has arrived, the children are already speaking French. They are also looking forward to their first day of television.

In the first grade classroom at the Kouassibileko school, a seven-year-old girl stands in the middle of the room, partially surrounded by 45 children seated in three rows of desks lined up against three walls.

The young Ivoirien teacher, casually dressed in an open-necked white shirt and blue gabardine pants, looks at her, touches his right eye, and enunciates carefully: "Je regarde Monique."

Then he asks, "C'est Monique?

"Oui, c'est Monique," 45 voices shout back at him. Monique returns to her seat, and is replaced by another girl.

"Dit bonjour à Soulange," the teacher asks of a seated student.

"Bonjour Soulange," the pupil shouts. Three dozen hands are raised and wave in the air. "M'sieur, M'sieur," the children cry, seeking to gain recognition. The teacher calls on one child and then another until he has gone around the room. "Bonjour, Soulange," each child shouts to the one standing in the middle of the room.

* * * *

At first, Ivoiriens were not sure how to take this educational innovation. Those few settled into a middle-class life were shocked. In *my* day, they said, school was a lot tougher. We had to memorize everything, and if we didn't get it right, we were turned out.

Others worried that the classroom teacher would become a *"pion,"* reduced to turning the television set on and off, that his authority in the classroom would be undermined. A whispering campaign complained of the "disappearance of the teacher." Press, radio, and mobile informational campaigns, launched even before schools opened to explain the concept of ETV, continued throughout the year. Though some criticism remains, fears have largely been dispelled.

The greatest worry of parents whose children were attending televised classes for the first time – the fear that their children would not pass their "year-end" tests in competition with those attending traditional schools – evaporated when the Government decided to do away with pass exams for all attending television schools. Twenty thousand students were thus assured of advancement to the second grade. This step was taken in the absence of any evaluation of the academic performance of those in televised classes. It became a matter of faith that children learned more because of television; since they learned more, no tests were needed.

Foreign educational advisors and experts applauded the Government's move; though they were somewhat more reserved in their faith, they had long felt that "pass tests" in the first years at the primary level – in any kind of school – were academically foolish and financially unwise.

* * * *

There is no electricity in Kouassibileko, so the television set operates on batteries — 16 of them, wrapped together on a shelf beneath the receiver, which is placed on a tall stand in a corner of the room. Though batteries cost a lot of money ($200 a set), they will last through two academic years — if the receiver is used during transmission times only. Nonetheless, for the Ivoirien Government, the annual replacement cost of batteries is high. (As it happens, TV sets are often kept on between transmissions, reducing battery life by as much as two-thirds.)

At two minutes before nine on the second Monday morning of the school year, the first grade teacher turns on the set. Background music (the Swingle Singers scat singing Bach) fills the room, while the ETV logo lights up the screen. At precisely the moment the year's first transmission is to begin, the picture scrambles; frantic efforts at adjustment prove fruitless. No matter; the program is only a five-minute singing exercise and the song is one known to all the children. The sound is good, and 46 children's voices are added to the televised voices of children singing the native song whose words are repeated over and over: "Mi nja ko, o yao, o ya."

* * * *

A report prepared at the Bouake ETV complex in November, 1971, noted that more than 8 per cent of all TV classes had experienced television set breakdowns lasting more than a week. Almost two-thirds of all TV classes reported disruptions, either in sound or image, for periods lasting less than a week. Only a quarter of all TV schools reported no breakdowns at all.

Maintenance for the television receivers is handled by la CATEL (Compagnie Africaine de Télévision), a private firm under government contract. CATEL is also responsible for the installation of television sets in the country's primary schools, and in addition, buys and distributes the batteries for the sets. Four service centers have been set up in the country, and CATEL operates a fleet of 16 cars, equipped with spare parts, for in-school servicing of malfunctioning sets. Each television school is visited once a month by CATEL servicemen whether or not any malfunctions have been reported. Yearly costs for the maintenance and servicing of receivers run to nearly $1,300,000, or twice the amount budgeted by the Government. This increase, the Government reports, is caused mainly by over-use of the batteries.

* * * *

Less than half the school-age children in Kouassibileko go to school. The school principal says that the school just isn't large enough to serve the village.

"There's only one room available for each grade, and if all who wanted to go to school did so, we would have to have two classrooms

to accommodate all the children. Those who cannot enter the first grade for reasons of space, have to wait a year. If, at age seven, they and their parents are still interested in an education, the seven-year-olds are put at the head of the waiting list."

He is pleased with the system of instructional television, notes that the children "learn more quickly now," and adds that all of last year's first-grade children have returned to school this year, to learn once more in a television classroom; television now embraces the first two years of primary education. Television will follow the children throughout the entire primary level cycle.

"None of the children in Primary One ever heard French before they came to school last week. Only the village chief has a radio, and when the villagers gather to listen to his radio, they will stay only to hear the programs in Baoulé."

The village chief is not too keen on spending money on the school, the principal complains. "We wanted to build an office for the teachers last year and we went to the village chief for help. 'What do you want an office for,' he asked. 'Are you trying to make a store out of the school?' " And, the Kouassibileko principal adds sadly, "No one here has the right to contradict the chief."

Almost everyone in the village is a farmer. No one works in Bouake. "If they do," the principal says, "they leave Kouassibileko, and they never come back."

* * * *

The opening of the school year in the Ivory Coast is handled by the nation's press as one of the big events of the year.

Ivoire Dimanche, a weekly tabloid, in its issue of September 24, 1972, treated its readers to a full-page cover drawing of a blackboard on which was scrawled: *"Ecoles: Dramatique rendez-vous."*

In its issue of September 25, the Ivoirien daily, *Fraternité Matin* had for its lead a story on the opening of the nation's primary schools. *"Rentrée Aujourd'hui Dans Le 'Primaire' "* ran the boxcar headline. A second headline, set in type usually reserved for declarations of war, proclaimed "60,000 Elèves Télévisuels." Two days later, *Fraternité Matin* still had not had enough: *"La Tradition Face Au Télévisuel – Abattons Les Mythes"* proclaimed the lead story. And the next day's edition of the paper lead off with the story, *"Le Maître: Ni Dieu Ni Sorcier."*

In September of 1972 – and this is what caused the oceans of black ink to run in the nation's press – 979 additional classes in the Ivory Coast were added to the instructional television system. Schools with televised programs in the first grade added sets for second grade use, and other schools (first grade only) were hooked up for the first time. Thus, in the beginning of its second year, television was educating about 62,000 school children throughout much of the country.

The Government's goal is to reach 720,000 students in 16,500 classes by 1980.

"What are the advantages of educational television," *Fraternité Matin* rhetorically asked. Evidently the country's informational campaign had proved so effective that the question no longer had to be answered. "Everyone knows now so it is not necessary to go into this," ran the editorial reply.

Certainly one advantage is television's ability to reform the curriculum without having first, to reform the teachers. One disadvantage of the old system, the newspaper noted, was that pedagogical concepts in the Ivory Coast were no longer relevant to the country's needs. This irrelevancy, the paper suggested, contributed mightily to the high drop-out rate in Ivoirien schools.

* * * *

On a Tuesday afternoon, at the television production center in Bouake, in an airconditioned studio, an Ivoirien primary school teacher sits at his desk facing a camera. The red light of the camera goes on, and an edition of **"Le Journal Des Maîtres"** *is filmed.*

Ivoirien primary schoolchildren are taught every day through television. So also, are the teachers. The children and the teachers both share this educational experiment during school hours. While the children hear the best French being spoken by the best-accented teachers in the country, their teachers, not so adept as those employed at the ETV Production Center, also learn. Teachers learn not only to mimic a good accent, but also learn, for example, new methods of teaching mathematical problems; at the same time, their pupils learn how to solve the problems.

One emission, however, **"Le Journal Des Maîtres"**, *is for the teachers only. During the 15 minutes of this program, the teachers, seated alone in the classroom after school, are acquainted with the lessons for the next day, and are given instructions in new pedagogical devices.*

The teacher at the studio smiles at the camera, and says "Bonjour" to his almost 1,000 colleagues scattered in schools throughout the country.

"Our talk today is going to be exclusively about natural materials – their use and their utility.

"Natural material is simply material furnished by the milieu in which the child lives. It is all the material that can be gathered by teachers and students alike. For example: grain, gourds, pods, sticks, little pebbles.

"It's the first material that children use in sensory exercises. In addition, this material is varied and different. But how can one use this material to advantage?

"At the beginning, it is recommended that you leave the children alone so that they can play freely with this material in a manner which will permit them to discover and exhaust their curiosity in the subject.

This first step is very important. Afterwards, you can suggest more interesting games to play which will develop their spirit of logic. Let's go over some examples of this type of activity."

The teacher leaves his desk and walks to a stand set up in the middle of the studio. Placed on the stand are grains of rice, two gourds, three bean pods, and some pebbles.

"Jean, viens ici," the teacher says to a boy of eight, who, wired for sound, walks to the stand from a corner of the studio where he had been waiting out of camera range. "Voici le matériel naturel, Jean. Regards-le bien." Jean looks at the props, and then, on command, turns his back to the stand. The teacher removes the three bean pods and hides them behind his back. "All right, Jean," the teacher says, "turn and look again at the material and tell me what is missing." Jean thinks for a while (it's in the script) and announces loudly, "Les capsules."

"Bien, Jean," the teacher says approvingly. Again on command, Jean turns his back, and the teacher adds a stick to the pile. Turning once more to the stand, Jean observes that something new ("le baton!") has been added.

Then addressing his television audience, the télé-maître goes to the heart of the matter by observing, "You will note that a proper game is one which serves to develop the intelligence and the sense of observation of the student. Nothing is acquired mechanically."

Returning to his desk, the teacher concludes the **"Journal Des Maîtres"** *by admonishing. "Some of you have written to us that you need more educational devices purchased from Abidjan, that you can't teach unless you have these things. But this is not the way to teach. Natural material is familiar to the students and this is good. It is easy to find, and above all, it is cheap. Au revoir."*

* * * *

At twenty minutes past ten on the following day, the first grade teacher at the Kouassibileko school turns on the television set. This time, it is working. After the ETV logo fades, a short film, shot last year by one of the three production crews from the Production Center, is shown.

Outdoors, by a river, three children are playing. One girl, about seven years old, is making a headdress by stringing together a handful of leaves. By her side, another girl of the same age, is making a leaf necklace. The third child, a boy, kneels by the river bank, folding a banana leaf into the shape of a dugout canoe.

When launched, the boat is drawn into the current, and bobs up and down for a minute before disappearing downstream. Finally, the film – which lasts but seven minutes – shows the three children making a spinning top of leaves that have been pierced onto a stick. The film is without dialogue; none is needed.

After the televised film is over, the pupils troop outside, and under the direction of their teacher, gather grass, sticks, pebbles and leaves from an uncultivated field which lies near the school. The exercise takes no more than ten minutes. The children go back to the classroom, then sit in groups of seven or eight on the floor and play. The teacher, an unheard and unseen presence in the room, walks from group to group observing their actions. ("Laissez aux enfants la possibilité de jouer librement avec ce matériel de manière à leur permettre de le découvrir et d'épuiser leur curiosité à son sujet" the **Journal des Maîtres** *had told him the day before.)*

* * * *

"For a total of 17 to 18 hours of televised film, one must multiply by 16 the number of hours to obtain the number of hours necessary to make them. This balancing factor of 16 refers to the average time of

production necessary for the completion of one hour's worth of programs; thus it takes four hours to produce one 10 to 15 minute program. This average has been observed for several years in the production of television films in Niger." . . . Document Number 7, *Note Rélative à l'emploi des Moyens de Production Pour l'Année 1972-1973 (Minutes from a Unesco meeting held in Paris in July, 1972)*

* * * *

In studio A, five children face the television camera. They each hold an umbrella which has been painted over with concentric rings and designs. "Tourne, tourne," cries out the young French **réalisateur.** *The five twirl the umbrellas; some do it slowly, others, more adept, whirl the umbrellas so that the painted circles fold into one another. The director looks at the camera monitor. He is interested only in the images the twirling umbrellas are making, for the sound track on the film is to be a voiceover of verse for use in the first grade.*

The children have been twirling their umbrellas for almost three hours. When they tire, the director himself, with a colleague, tries his

hand with the umbrellas, blocks out positions, and adjusts the placement of boxes on which two children on stage rear stand so that they might be visible to the camera.

The children have been instructed to hide behind the umbrellas as they twirl them so that only the umbrellas can be seen on the TV monitor. At the end of the routine, the script calls for the children to pop out from behind their parasols and expose their faces to the camera.

Into the fourth hour, the director is ready for the final take. Because silence in the studio is not necessary, he shouts out instructions during the filming. "Câche ta tête, câche ta tête," he sings. "Bien." "Tourne, tourne, tourne." "Ne bouge pas, ne bouge pas," he shouts. One child's back can be seen on the monitor ("Ah . . . merde!"). But the children do well. They pop out from behind the umbrellas in unison and exactly on cue.

Nearly four hours have gone into the filming of this one minute program. Afterwards, the doggerel will be dubbed in. It goes:

"Il pleut, et moi je ris
Je suis déjà sorti
Avec mon parapluie.
Oh! Comme il est gentil!"

* * * *

During the first year of television production in Bouake, 161 persons worked directly on the production of television films for 447 first grade classes. Most – 103 – were Ivoiriens; of the remaining 58, 48 were French, nine were Canadian, and one was Belgian. The Ivoiriens hold the technical positions – light men, sound men, camera men – while the foreigners write most of the scripts, and direct the three camera crews.

No one other than an Ivoirien is ever seen on television, however. The *télé-maîtres,* who are chosen from among the very best of the country's primary school teachers, live in housing provided by the Government at the TV complex in Bouake. They are full-time television teachers. The 30 or so *télé-élèves* are selected from schools in the Bouake area. None works more than a half-day a week. The weekly "regulars" are those who take part in a televised series – language classes, for instance – which depends on the linguistic or academic abilities of the children. For other programs, children are generally chosen by school teachers and principals on the basis of their potential television personality and image.

* * * *

Although there are no hard facts to go on, it seems clear that first and second grade children in the Ivory Coast – at least those 60,000 now attending televised classes – are getting a good education.

The trauma of acquiring an education in the Ivory Coast should not be minimized. Most Ivoiriens are both rural and poor; for them, pursuit of an education anywhere is difficult. But when one adds the additional obstacle – the fact that children are taught in a language unfamiliar to them – one can understand the problems inherent in providing a truly relevant education in the country – and in other countries similarly situated.

In the Ivory Coast today, 60,000 school children no longer learn by rote, no longer pick up accents taught by unskilled teachers. But nonetheless, these children, *all* schoolchildren, still learn in a foreign language. The concepts of "education" and "modernization" are thus, perforce, equated with a European – French – milieu and culture. Ivoirien schoolchildren, by the very act of being educated, are cut off from their own milieu and culture, and, as a result, from their parents and non-educated peers. Education can hardly be a unifying factor in a country when the 75 per cent who have not gone to school know only their native tongues, while the 25 per cent who have gone to school, become a part of the modern world by their ability to reason and think in a foreign language. Education, the Unesco report of July, 1971 said, must "give to the citizens of the Ivory Coast, the basis of a modern culture;" it must also permit the youth of the country to "participate effectively in both economic and social development."

Only when every child who wishes to, can and does go to school will Ivoiriens, *tout ensemble,* be able to participate effectively in their country's social as well as economic development. It is no longer sufficient to have enough skilled graduates to take over positions currently held by foreign advisors and technicians. But even if education were to become universal in the next decade in the Ivory Coast, an educational gap would still exist, for today's seven-year-old second grader – if he were to stay in school through the secondary level – will not be able to contribute greatly to the economic and cultural life of the country for at least half a generation.

The Ivoirien Government is today studying means by which television – or radio – might be used to promote rural development and to end, as one paper put it, "the cultural enslavement of the villages." Television would be a natural medium – except for the fact that a universally-understood native language does not exist in the country. A one-channel television system, broadcasting in almost a score of languages, would probably spread the effort of modernization about too thinly.

For the Government of the Ivory Coast, the cost of instructional television – and it is considerable ($14 million over ten years, with yearly recurrent costs to the Government by 1980 of more than $3 million) – poses no major problem. As more and more students are included in the educational television system, unit costs will decline; and if, as anticipated, repeater rates of students in television classrooms de-

crease, either by Government fiat as is the case today, or by a real and proven increase in comprehension by the students, more student places in schools already constructed will be opened up.

The main question, then, is this: to what end, educational television?

One foreign diplomat said cynically that instructional television in the Ivory Coast will result in an increase in the number of educated taxi drivers in Abidjan. This nightmare certainly is not what the Government has in mind. The long-term goal is to integrate the mass of the Ivoirien people into their social system, whether it be urban or rural. But from the study on the effects of educational television in Niger, the Ivoirien Government is aware that television cannot, by itself, stem the flow of discontented farmers into the nation's urban areas.

In the recent past, education only served to increase that rural dissatisfaction, and to add to the numbers of people moving to the cities. The Government's 1971-75 Plan admits that education in rural areas has had only a "negative impact" upon those living in the countryside. Primary education – in the past – was meant to serve as a training ground for those few who would go on to secondary school, and who, in time, would become members of the nation's elite. This rationale has, to a certain extent, changed. In the television schools, true, primary schoolchildren are not taught how to be better farmers. They are taught, however, to be spontaneous, to think for themselves. If a rural schoolboy in the past, learned something by rote, something which was, in fact, meant for only those few who were to be the leaders of the future, small wonder that he so often dropped out of – or was dropped from – school at an early age. Small wonder, too, that so often, he dropped out of rural life altogether, depriving the countryside, the current Five-Year Plan says, "of a privileged factor of modernization." If, however, a schoolboy rural or urban, can be taught to think for himself and to act in a spontaneous manner, he can then think for himself anywhere, and can be spontaneous anywhere.

Television, the Unesco report concludes, should enable the country's primary schools "to become a factor in national, cultural and economic unification;" it should allow those who finish "their education at the primary level (to) integrate themselves into a dynamic rural milieu instead of migrating to urban areas;" and it should permit "most students (to) finish primary school without repeating one or more grades, while at the same time having acquired basic knowledge which is necessary for the social and human growth of all the citizens of the Ivory Coast."

For 60,000 students, a start has been made toward the achievement of those goals. Much remains to be done. But the Ivory Coast has come so far – economically – in the past 13 years that one would be foolish to bet that social progress will not advance as well.

Footnotes

1. Most of the material used to document the crisis comes from the Unesco-sponsored report of the International Commission on the Development of Education. Findings of the Commission, which was headed by Edgar Faure, have been published in book form under the title, *Learning To Be – The World of Education Today and Tomorrow* (Unesco, Paris; Harrap, London. 1972).

2. *Learning To Be – The World of Education Today and Tomorrow,* pp. 50.

3. Ibid, pp. 33.

4. Frederick Harbison, *Education and the Development of Nations,* John W. Hanson and Cole S. Brembeck, editors, pp. 149. Holt, Rinehart and Winston, New York, 1966. (From an article, *Education for Development,* which originally appeared in *Scientific American,* Vol. 24, Number 3, pp. 140-147. 1963.

5. Gunnar Myrdal, *Asian Drama,* pp. 1545. The Twentieth Century Fund, New York. 1968.

6. John Vaizey, *The Economics of Education,* pp. 37. Faber and Faber, London. 1962.

7. George Tobias, *Education and the Development of Nations,* John W. Hanson and Cole S. Brembeck, editors, pp. 412. (From an article *Problems in International Financing of Education,* Unesco-ECAFE Regional Technical Assistance Seminar on Investment in Education in the Countries Participating in the Karachi Plan, Bangkok, April 6-13, 1964.)

8. Ibid, pp. 412.

9. Ibid, pp. 412.

10. Gunnar Myrdal, *Asian Drama,* pp. 702-3.

11. At the end of 1972, there were 4,000 ujamaa villages with a population of 1,500,000 (10 per cent of the country's total population) in Tanzania.

12. Elliot J. Berg, *Ghana and the Ivory Coast – Perspectives on Modernization,* Edited by Philip Foster and Aristide R. Zolberg, pp. 215. The University of Chicago Press, Chicago. 1971.

13. Ibid, pp. 187.

14. Alan Rake, *Ivory Coast: Peasant Farmers Produced the Real Miracle,* pp. I.C.4-5. From the August, 1972 issue of *African Development.* London. (It should also be noted that the retailers are not all French. A considerable number are Lebanese.)

15. Remi Clignet and Philip Foster, *Ghana and the Ivory Coast – Perspectives on Modernization,* Edited by Philip Foster and Aristide R. Zolberg, pp. 268.

16. Ibid, pp. 279.

17. Ibid, pp. 279.

18. Ibid, pp. 282.

19. Programme D'education Télévisuelle, Ministère de L'education nationale (République de Côte-d'Ivoire), Volume 3, pp. 55.

20. Ibid, pp. 18.

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